

**List of publications with ESRF author(s) and describing an ESRF experiment**

1. **03PY101:** PYZALLA A., REETZ B., WEGENER J., JACQUES A., FERRY O., FEIEREISEN J.P., BUSLAPS T., "In-situ analysis of microstress and texture development during tensile deformation of MMCs at room temperature and at elevated temperatures using synchrotron radiation", *Materials Science Forum* **404-407**, 535-540 (2002).
2. **03RE102:** REVOL-MULLER C., BENOIT-CATTIN H., CARILLON Y., ODET C., BRIGUET A., PEYRIN F., "Bone MRI segmentation assessment based on synchrotron radiation computed microtomography", *IEEE Transactions on Nuclear Science* **49**, 220-224 (2002).
3. **03RO103:** ROGALEV A., GOULON J., "X-ray excited optical luminescence spectroscopies", *Advanced Series in Physical Chemistry* **12B**, 707-760 (2002).
4. In : "Chemical Applications of Synchrotron Radiation " SHAM T.K. (Ed.) (World Scientific, 2002) pp. 707-760.
5. **03GA104:** GASPAROTTO A., CESCA T., EL HABRA N., FRABONI B., BOSCHERINI F., PRIOLO F., MOREIRA E.C., CIATTO G., D'ACAPITO F., SCAMARCIO G., "Implant and characterization of highly concentrated Fe deep centers in InP", *Materials Science and Engineering B* **91-92**, 503-507 (2002).
6. **03RA105:** RAU C., SOMOGYI A., BYTCHKOV A., SIMIONOVICI A., "XANES microimaging and tomography", *Proceedings SPIE* **4503**, 249-255 (2002).
7. **03SC106:** SCHROER C.G., BENNER B., GÜNZLER T.F., KUHLMANN M., LENGELER B., SCHRÖDER W.H., KUHN A.J., SIMIONOVICI A.S., SNIGIREV A., SNIGIREVA I., "High resolution element mapping inside biological samples using fluorescence microtomography", *Proceedings SPIE* **4503**, 230-239 (2002).
8. **03SI107:** SIMIONOVICI A.S., CHUKALINA M., VEKEMANS B., LEMELLE L., GILLET P., SCHROER C., LENGELER B., SCHRÖDER W., JEFFRIES T., "New results in X-ray computed fluorescence tomography", *Proceedings SPIE* **4503**, 222-229 (2002).
9. **03MU108:** MÜLLER B., THURNER P., BECKMANN F., WEITKAMP T., RAU C., BERNHARDT R., KARAMUK E., ECKERT L., BRANDT J., BUCHLOH S., WINTERMANTEL E., SCHARNWEBER D., WORCH H., "Non-destructive three-dimensional evaluation of biocompatible materials by microtomography using synchrotron radiation", *Proceedings SPIE* **4503**, 178-188 (2002).
10. **03WE109:** WEITKAMP T., RAU C., SNIGIREV A.A., BENNER B., GÜNZLER T.F., KUHLMANN M., SCHROER C.G., "In-line phase contrast in synchrotron-radiation microradiography and tomography", *Proceedings SPIE* **4503**, 92-102 (2002).
11. **03SC110:** SCHROER C.G., BENNER B., GÜNZLER T.F., KUHLMANN M., LENGELER B., RAU C., WEITKAMP T., SNIGIREV A., SNIGIREVA I., "Magnified hard X-ray microtomography: Toward tomography with sub-micron resolution", *Proceedings SPIE* **4503**, 23-33 (2002).
12. **03RA111:** RAU C., WEITKAMP T., SNIGIREV A., SCHROER C., BENNER B., TÜMMLER J., GÜNZLER T.F., KUHLMANN M., LENGELER B., KRILL C., DOEBRICH K., MICHELS D., MICHELS A., "Tomography with high resolution", *Proceedings SPIE* **4503**, 14-22 (2002).
13. **03KA114:** KAULICH B., BACESCU D., COCCO D., SUSINI J., SALOME M., DHEZ O., DAVID C., WEITKAMP T., DI FABRIZIO E., CABRINI S., MORRISON G., CHARALAMBOUS P., THIEME J., WILHEIN T., KOVAC J., PODNAR M., KISKINOVA M., "Twinmic: A european twin microscope station combining full-field imaging and scanning microscopy", *Journal de Physique IV* **104**, 103-107 (2003).
14. **03DA115:** DABIN Y., ROSTAING G., GAGLIARDINI E., NICOLA M., BARRETT R., SUSINI J., "Precision-mechanisms for high accuracy beamline instruments at the ESRF: A review", *Journal de Physique IV* **104**, 109-112 (2003).
15. **03DA116:** DABIN C., NOEHAMMER B., SOLAK H.H., GLAUS F., HAAS B., GRUBELNIK A., DOLOCAN A., ZIEGLER E., HIGNETTE O., BURGHAMMER M., KAULICH B., SUSINI J.,

- BONGAERTS J.H.H., VAN DER VEEN J.F., "Diffractive soft and hard X-ray optics", *Journal de Physique IV* **104**, 171-176 (2003).
16. **03FR117:** FREUND A., "Recent progress in X-ray optics at the ESRF", *Journal de Physique IV* **104**, 165-170 (2003).
  17. **03DI118:** DI FABRIZIO E., COJOC D., CABRINI S., KAULICH B., WILHEIN T., SUSINI J., "Design and fabrication of new optics for X-ray microscopy and material science", *Journal de Physique IV* **104**, 177-183 (2003).
  18. **03NO119:** NÖHAMMER B., HOSZOWSKA J., HERZIG H.P., DAVID C., "Zoneplates for hard X-rays with ultra-high diffraction efficiencies", *Journal de Physique IV* **104**, 193-195 (2003).
  19. **03KO120:** KOHN V., SNIGIREVA I., SNIGIREV A., "Specific properties of X-ray compound refractive lens. Theoretical analysis", *Journal de Physique IV* **104**, 217-220 (2003).
  20. **03LE121:** LENGELER B., SCHROER C.G., KUHLMANN M., BENNER B., GÜNZLER T.F., KURAPOVA O., RAU C., WEITKAMP T., SIMIONOVICI A., SNIGIREV A., SNIGIREVA I., "Beryllium parabolic refractive X-ray lenses for full field imaging and scanning microscopy with hard X-rays", *Journal de Physique IV* **104**, 221 (2003).
  21. **03NO122:** NÖHAMMER B., HOSZOWSKA J., FREUND A., SOMOGYI A., SIMIONOVICI A., DAVID C., "Focusing of hard X-rays using diamond and silicon refractive lenses", *Journal de Physique IV* **104**, 221 (2003).
  22. **03SH123:** SHABEL'NIKOV L., SNIGIREV A., SNIGIREVA I., KUZNETSOV S., YUNKIN V., LEVASHOV V., GRIGORIEV M., "X-ray refractive planar lenses in combination with planar X-ray waveguide", *Journal de Physique IV* **104**, 227-230 (2003).
  23. **03BR124:** BRIKI F., MERIGOUX C., SARROT-REYNAULD F., SALOME M., FAYARD B., SUSINI J., DOUCET J., "Evidence for calcium soaps in human hair shaft revealed by sub-micrometer X-ray fluorescence", *Journal de Physique IV* **104**, 337-340 (2003).
  24. **03TA125:** TAKEMOTO K., UEKI T., FAYARD B., YAMAMOTO A., SALOME M., SCIPPA S., SUSINI J., UYAMA T., MICHIBATA H., KIHARA H., "Local distribution of vanadium in the living blood cells of ascidians by fluorescence scanning X-ray microscopy ID21 at ESRF", *Journal de Physique IV* **104**, 333-336 (2003).
  25. **03CE126:** CEDOLA A., STANIC V., BURGHAMMER M., LAGOMARSINO S., RUSTICHELLI F., GIARDINO R., NICOLI ALDINI N., FINI M., DI FONZO S., "X-ray micro-diffraction analysis of reconstructed bone at Zr prosthetic surface with sub-micrometer spatial resolution", *Journal de Physique IV* **104**, 329-332 (2003).
  26. **03SZ127:** SZCZERBOWSKA-BORUCHOWSKA M., LANKOSZ M., OSTACHOWICZ J., ADAMEK D., KRYGOWSKA-WAJS A., TOMIK B., SZCZUDLIK A., SIMIONOVICI A., BOHIC S., "Application of synchrotron radiation for elemental microanalysis of human central nervous system tissue", *Journal de Physique IV* **104**, 325-328 (2003).
  27. **03PI128:** PINHEIRO T., ALVES L.C., BARREIROS A., ARAUJO F., BOHIC S., SIMIONOVICI A., "Imaging and quantification of trace metals in thin biological specimens using microprobe techniques: Synchrotron induced X-ray fluorescence microprobe and nuclear microprobe", *Journal de Physique IV* **104**, 321-324 (2003).
  28. **03OR129:** ORTEGA R., FAYARD B., SALOME M., DEVES G., SUSINI J., "Chromium oxidation state mapping in human cells", *Journal de Physique IV* **104**, 289-292 (2003).
  29. **03BI131:** BIGAULT T., ZIEGLER E., MORAWE C., LUDWIG W., SOUFLI R., "High spatial-resolution reflectivity and fluorescence mapping of multilayers using a sub-micrometer focused synchrotron X-ray beam", *Journal de Physique IV* **104**, 247-250 (2003).
  30. **03HI132:** HIGNETTE O., CLOETENS P., LEE W.K., LUDWIG W., ROSTAING G., "Hard X-ray microscopy with reflecting mirrors status and perspectives of the ESRF technology", *Journal de Physique IV* **104**, 231-234 (2003).

31. **03GO133:** GOLOSIO B., BRUNETTI A., CESAREO R., "Correction for X-ray absorption in compton tomography", *Journal de Physique IV* **104**, 651-654 (2003).
32. **03GO134:** GOLOSIO B., SIMIONOVICI A., SOMOGYI A., CAMERANI C., STEENARI B.M., "X-ray fluorescence tomography of individual waste fly ash particles", *Journal de Physique IV* **104**, 647-650 (2003).
33. **03CH135:** CHUKALINA M., SIMIONOVICI A., LEMELLE L., RAU C., VINCZE L., GILLET P., "X-ray fluorescence tomography for non-destructive semi-quantitative study of microobjects", *Journal de Physique IV* **104**, 627-630 (2003).
34. **03WE136:** WEITKAMP T., RAU C., SNIGIREV A., BENNER B., KUHLMANN M., SCHROER C.G., "Simulation of coherent image formation in a hard X-ray CRL microscope", *Journal de Physique IV* **104**, 579-582 (2003).
35. **03DA137:** DAVID C., NÖHAMMER B., SOLAK H.H., ZIEGLER E., "Hard X-ray shearing interferometry", *Journal de Physique IV* **104**, 595-598 (2003).
36. **03NE138:** NEUHÄUSLER U., SCHNEIDER G., LUDWIG W., HAMBACH D., "Phase contrast X-ray microscopy at 4 keV photon energy with 60 nm resolution", *Journal de Physique IV* **104**, 567-570 (2003).
37. **03MO139:** MORRISON G., EATON W.J., BARRETT R., CHARALAMBOUS P., "STXM imaging with a configured detector", *Journal de Physique IV* **104**, 547-550 (2003).
38. **03WI140:** WILHEIN T., KAULICH B., DI FABRIZIO E., ROMANATO F., ALTISSIMO M., SUSINI J., FAYARD B., NEUHÄUSLER U., CABRINI S., POLACK F., "Differential interference contrast X-ray microscopy with twin zone plates at ESRF beamline ID21", *Journal de Physique IV* **104**, 535-541 (2003).
39. **03AR141:** ARAUJO M.F., PINHEIRO T., VALERIO P., BARREIROS A., SIMIONOVICI A., BOHIC S., MELO A., "Analysis of a Roman *centaurus* from Canas de Senhorim (Portugal) - comparative study using EDXRF and SXRF", *Journal de Physique IV* **104**, 523-526 (2003).
40. **03KR142:** KRUIJVER S.O., ZHAO L., SIETSMA J., OFFERMAN S.E., VAN DIJK N.H., LAURIDSEN E.M., MARGULIES L., GRIGULL S., POULSEN H.F., VAN DER ZWAAG S., "*In situ* observations on the mechanical stability of austenite in TRIP-steel", *Journal de Physique IV* **104**, 499-502 (2003).
41. **03LA143:** LAURIDSEN E.M., NIELSEN S.F., MARGULIES L., SCHMIDT S., POULSEN H.F., JUUL JENSEN D., "The 3-dimensional X-ray diffraction microscope: 3D maps of grains and grain dynamics in polycrystalline materials", *Journal de Physique IV* **104**, 495-498 (2003).
42. **03BA144:** BARRETT R., TROMSON D., HAINAUT O., AMOSOV V.N., BERGONZO P., "Imaging the sensitivity inhomogeneities of diamond detectors", *Journal de Physique IV* **104**, 491-494 (2003).
43. **03RO145:** ROSE J., CROUZET N., TROTIGNON L., GRIMAL S., SUSINI J., KHOURY H., SALAMEH E., MILODOWSKI A., MERCIER F., "Effect of leaching on the crystallographic sites of trace metals associated with natural cements (site of Maqarin, Jordan): Case of Cr", *Journal de Physique IV* **104**, 447-450 (2003).
44. **03NE146:** NEUHÄUSLER U., SCHMIDT C., HOCH M., SUSINI J., "Fluorescence X-ray microscopy on hydrated tributyltin-clay mineral suspensions", *Journal de Physique IV* **104**, 443-446 (2003).
45. **03SC147:** SCHMIDT C., THIEME J., NEUHÄUSLER U., JACOBSEN C., KAULICH B., SALOME M., SUSINI J., "Spectromicroscopy of soil colloids", *Journal de Physique IV* **104**, 405-408 (2003).
46. **03ME148:** METRICH N., SUSINI J., GALOISY L., CALAS G., BONNIN-MOSBAH M., MENEZ B., "X-ray microspectroscopy of sulfur in basaltic glass inclusions. Inference on the volcanic sulfur emissions", *Journal de Physique IV* **104**, 393-397 (2003).
47. **03SC149:** SCHROER C.G., BENNER B., GÜNZLER T.F., KUHLMANN M., LENGELER B., SCHRÖDER W.H., KUHN A.J., SIMIONOVICI A., SNIGIREV A., SNIGIREVA I., "High

- resolution element mapping inside biological samples using fluorescence microtomography", *Journal de Physique IV* **104**, 353 (2003).
48. **03LE150:** LEMELLE L., SIMIONOVICI A., SUSINI J., OGER P., CHUKALINA M., RAU C., GOLOSIO B., GILLET P., "X-ray imaging techniques and exobiology", *Journal de Physique IV* **104**, 377-380 (2003).
  49. **03PH151:** PHILIPPOT P., FORIEL J., SUSINI J., KHODJA H., GRASSINEAU N., FOUQUET Y., "High-resolution imaging of transition metal and sulfur-redox distribution in individual microfossils", *Journal de Physique IV* **104**, 381-384 (2003).
  50. **03FO152:** FORIEL J., PHILIPPOT P., MENEZ B., SIMIONOVICI A., BOHIC S., "Trace element content and distribution in a single fluid inclusion from Dunbar oil field, North Sea", *Journal de Physique IV* **104**, 385-390 (2003).
  51. **03ME153:** MENEZ B., BUREAU H., SIMIONOVICI A., SOMOGYI A., MASSARE D., MALAVERGNE V., "*In situ* SXRF determination of Pb partitioning in hydrothermal Diamond Anvill Cell", *Journal de Physique IV* **104**, 391 (2003).
  52. **03CR154:** CRICHTON W.A., MEZOUAR M., MONACO G., FALCONI S., "Phosphorus: New *in situ* powder data from large-volume apparatus", *Powder Diffraction* **18**, 155-158 (2003).
  53. **03RA155:** RAU C., SOMOGYI A., SIMIONOVICI A., "Microimaging and tomography with chemical speciation", *Nuclear Instruments and Methods in Physics Research B* **200**, 444-450 (2003).
  54. **03DA156:** D'ACAPITO F., GHIGNA P., ALESSANDRI I., CARDELLI A., DAVOLI I., "Probing the initial stages of solid-state reactions by total reflection EXAFS (reflEXAFS)", *Nuclear Instruments and Methods in Physics Research B* **200**, 421-424 (2003).
  55. **03LO157:** LORENZEN M., HANFLAND M., MERMET A., "Poly(tetrafluoroethylene) under pressure: X-diffraction studies", *Nuclear Instruments and Methods in Physics Research B* **200**, 416-420 (2003).
  56. **03DA158:** DALCONI M.C., MENEGHINI C., NUZZO S., WENK R., MOBILIO S., "Structure of bioapatite in human foetal bones: An X-ray diffraction study", *Nuclear Instruments and Methods in Physics Research B* **200**, 406-410 (2003).
  57. **03TH159:** THURNER P., MÜLLER B., BECKMANN F., WEITKAMP T., RAU C., MÜLLER R., HUBBELL J.A., SENNHAUSER U., "Tomography studies of human foreskin fibroblasts on polymer yarns", *Nuclear Instruments and Methods in Physics Research B* **200**, 397-405 (2003).
  58. **03DI160:** DIOLOGENT F., CARON P., D'ALMEIDA T., JACQUES A., BASTIE P., "The  $\tilde{a}/\tilde{a}'$  mismatch in Ni based superalloys: In situ measurements during a creep test", *Nuclear Instruments and Methods in Physics Research B* **200**, 346-351 (2003).
  59. **03PE161:** PEREIRO-LOPEZ E., LUDWIG W., BELLET D., BARUCHEL J., "Grain boundary liquid metal wetting: A synchrotron micro-radiographic investigation", *Nuclear Instruments and Methods in Physics Research B* **200**, 333-338 (2003).
  60. **03HA162:** HÄRTWIG J., BARUCHEL J., KUHN H., HUANG X.R., DUDLEY M., PERNOT E., "X-ray "magnifying" imaging investigation of giant Burgers vector micropipe-dislocations in 4H-SiC", *Nuclear Instruments and Methods in Physics Research B* **200**, 323-328 (2003).
  61. **03CO163:** COINDREAU O., VIGNOLES G.L., CLOETENS P., "Direct 3D microscale imaging of carbon-carbon composites with computed holotomography", *Nuclear Instruments and Methods in Physics Research B* **200**, 308-314 (2003).
  62. **03BA164:** BABOUT L., LUDWIG W., MAIRE E., BUFFIERE J.Y., "Damage assessment in metallic structural materials using high resolution synchrotron X-ray tomography", *Nuclear Instruments and Methods in Physics Research B* **200**, 303-307 (2003).
  63. **03LA165:** LAME O., BELLET D., DI MICHIEL M., BOUVARD D., "In situ microtomography investigation of metal powder compacts during sintering", *Nuclear Instruments and Methods in Physics Research B* **200**, 287-294 (2003).

64. **03SA166:** SALVO L., CLOETENS P., MAIRE E., ZABLER S., BLANDIN J.J., BUFFIERE J.Y., LUDWIG W., BOLLER E., BELLET D., JOSSEROND C., "X-ray micro-tomography an attractive characterisation technique in materials science", Nuclear Instruments and Methods in Physics Research B **200**, 273-286 (2003).
65. **03CI167:** CIATTO G., BOSCHERINI F., D'ACAPITO F., MOBILIO S., BALDASSARRI H.V.H.G., POLIMENI A., CAPIZZI M., GOLLUB D., FORCHEL A., "Atomic ordering in (InGa)(AsN) quantum wells: An In K-edge X-ray absorption investigation", Nuclear Instruments and Methods in Physics Research B **200**, 34-39 (2003).
66. **03ME168:** MENEGHINI C., MOBILIO S., GARCIA-PRIETO A., FDEZ-GUBIEDA M.F., "Structure and magnetic properties in CoCu granular alloys", Nuclear Instruments and Methods in Physics Research B **200**, 215-219 (2003).
67. **03LA169:** LAMBERTI C., PRESTIPINO C., BORDIGA S., BERLIER G., SPOTO G., ZECCHINA A., LALONI A., LA MANNA F., D'ANCA F., FELICI R., D'ACAPITO F., ROY P., "Description of a flexible cell for in situ X-ray and far-IR characterization of the surface of powdered materials", Nuclear Instruments and Methods in Physics Research B **200**, 196-201 (2003).
68. **03BA170:** BATTAGLIN G., CATTARUZZA E., GONELLA F., POLLONI R., D'ACAPITO F., COLONNA S., MATTEI G., MAURIZIO C., MAZZOLDI P., PADOVANI S., SADA C., QUARANTA A., LONGO A., "Silver nanocluster formation in ion-exchanged glasses by annealing, ion beam and laser beam irradiation: An EXAFS study", Nuclear Instruments and Methods in Physics Research B **200**, 185-190 (2003).
69. **03MA171:** MAURIZIO C., MATTEI G., MAZZOLDI P., PADOVANI S., CATTARUZZA E., GONELLA F., D'ACAPITO F., ZONTONE F., "Deviation from the virtual crystal approximation in disordered Au-Cu alloy nanocrystals: EXAFS and GIXRD investigation", Nuclear Instruments and Methods in Physics Research B **200**, 178-184 (2003).
70. **03FR172:** FERRIANI P., GHIRINGHELLI G., FERRARI G., BERTONI C.M., TAGLIAFERRI A., BRAICOVICH L., BROOKES N.B., "Resonant inelastic X-ray scattering from magnetic systems: Mn in MnFe<sub>2</sub>O<sub>4</sub>", Nuclear Instruments and Methods in Physics Research B **200**, 220-225 (2003).
71. **03SP173:** SPIGA S., FANCIULLI M., FERRETTI N., BOSCHERINI F., D'ACAPITO F., CIATTO G., SCHMIDT B., "Formation and structure of Sn and Sb nanoclusters in thin SiO<sub>2</sub> films", Nuclear Instruments and Methods in Physics Research B **200**, 171-177 (2003).
72. **03RE174:** RESSLER T., JENTOFT R.E., WIENOLD J., GIRGSDIES F., NEISIUS T., TIMPE O., "Structure-activity relationships of heterogeneous catalysts from time-resolved X-ray absorption spectroscopy", Nuclear Instruments and Methods in Physics Research B **200**, 165-170 (2003).
73. **03MA175:** MAURIZIO C., GONELLA F., CATTARUZZA E., MAZZOLDI P., D'ACAPITO F., "Implanted dielectrics: Synchrotron radiation studies by absorption and diffraction techniques", Nuclear Instruments and Methods in Physics Research B **200**, 126-137 (2003).
74. **03MI176:** MINTOVA S., METZGER T.H., BEIN T., "Grazing incidence synchrotron X-ray diffraction study of crystal orientation in microporous films", Nuclear Instruments and Methods in Physics Research B **200**, 160-164 (2003).
75. **03LA177:** LAMBERTI C., PRESTIPINO C., BORDIGA S., FITCH A.N., MARRA G.L., "Characterization of isolated Ag cations in homoionic Ag-Y zeolites: A combined anomalous XRPD and EXAFS study", Nuclear Instruments and Methods in Physics Research B **200**, 155-159 (2003).
76. **03SP178:** SPIZZO F., RONCONI F., ALBERTINI F., CASOLI F., PARETI L., TURILLI G., BOLZONI F., MAZUELAS A., FERRERO C., GHIRINGHELLI G., TAGLIAFERRI A., METZGER H., "Size and ordering of sputtered Co nanoparticles in Co/Cu multilayers", Nuclear Instruments and Methods in Physics Research B **200**, 142-147 (2003).
77. **03KA179:** KATSIKINI M., PALOURA E.C., BOSCHERINI F., D'ACAPITO F., LIOUTAS C.B., DOPPAPALUDI D., "Microstructural characterization of In<sub>x</sub>Ga<sub>1-x</sub>N MBE samples", Nuclear Instruments and Methods in Physics Research B **200**, 114-119 (2003).

78. **03CI180:** CIATTO G., D'ACAPITO F., FRABONI B., BOSCHERINI F., EL HABRA N., CESCATA., GASPAROTTO A., MOREIRA E.C., PRIOLO F., "Local structure of iron implanted in indium phosphide", Nuclear Instruments and Methods in Physics Research B **200**, 100-104 (2003).
79. **03CH181:** CHAMARD V., METZGER T.H., SZTUCKI M., TOLAN M., BELLET-AMALRIC E., DAUDIN B., ADELMANN C., MARIETTE H., "Anomalous diffraction in grazing incidence to study the strain induced by GaN quantum dots stacked in an AlN multilayer", Nuclear Instruments and Methods in Physics Research B **200**, 95-99 (2003).
80. **03AQ182:** AQUILANTI G., CRICHTON W.A., LE BIHAN T., PASCARELLI S., "High-pressure X-ray diffraction study of InAs", Nuclear Instruments and Methods in Physics Research B **200**, 90-94 (2003).
81. **03AC183:** D'ACAPITO F., COLONNA S., ARCIPRETE F., BALZAROTTI A., DAVOLI I., PATELLA F., MOBILIO S., "In<sub>x</sub>Ga<sub>(1-x)</sub>As quantum dots grown on GaAs studied by EXAFS in total reflection mode (ReflEXAFS)", Nuclear Instruments and Methods in Physics Research B **200**, 85-89 (2003).
82. **03RO184:** ROTH S.V., BURGHAMMER M., GILLES R., MUKHERJI D., ROESLER J., STRUNZ P., "Precipitate scanning in Ni-base  $\tilde{a}/\tilde{a}'$ -superalloys", Nuclear Instruments and Methods in Physics Research B **200**, 255-260 (2003).
83. **03SZ185:** SZTUCKI M., METZGER T.H., MILITA S., BERBERICH F., SCHELL N., ROUVIERE J.L., PATEL J., "Depth resolved investigations of boron implanted silicon", Nuclear Instruments and Methods in Physics Research B **200**, 52-59 (2003).
84. **03MI186:** MITCHELL J.B.A., LEGARREC J.L., TRAVERS D., ROWE B.R., RANDLER R.J., PLECH A., WULFF M., "A new apparatus for the measurement of X-ray absorption by flame generated particles", Nuclear Instruments and Methods in Physics Research B **207**, 227-231 (2003).
85. **03PA187:** PADOVANI S., SADA C., MAZZOLDI P., BRUNETTI A., BORGIA I., SGAMELLOTTI A., GIULIVI A., D'ACAPITO F., BATTAGLIN G., "Copper in glazes of Renaissance luster pottery: Nanoparticles, ions, and local environment", Journal of Applied Physics **93**, 10058-10063 (2003).
86. **03DE188:** DEEN P.P., GOFF J.P., TOADER A.M., YAKHOU F., KLENKE J., WARD R.C.C., WELLS M.R., "Long-range magnetic order in intermediate-valence CeLu alloys", Applied Physics A **74**, S784-S785 (2002).
87. **03HA189:** HAIRE R.G., HEATHMAN S., IDIRI M., LE BIHAN T., LINDBAUM A., REBIZANT J., "Pressure-induced changes in protactinium metal: Importance to actinide-metal bonding concepts", Physical Review B **67**, 134101-1-134101-10 (2003).
88. **03ME190:** MEYERHEIM H.L., SANDER D., POPESCU R., KIRSCHNER J., ROBACH O., FERRER S., STEADMAN P., "Ni-induced giant stress and surface relaxation in W(110)", Physical Review B **67**, 155422-1-155422-4 (2003).
89. **03SC191:** SCHWARZ U., AKSELRUD L., ROSNER H., ORMECI A., GRIN Y., HANFLAND M., "Structure and stability of the modulated phase Sb-II", Physical Review B **67**, 214101-1-214101-7 (2003).
90. **03MA192:** MADSEN A., STRUTH B., GRUEBEL G., "Structure and dynamics of a free liquid crystal surface at the N-to-SmA phase transition", Physica B **336**, 216-221 (2003).
91. **03SA193:** SALDITT T., PFEIFFER F., PERZL H., VIX A., MENNICKE U., JARRE A., MAZUELAS A., METZGER T.H., "X-ray waveguides and thin macromolecular films", Physica B **336**, 181-192 (2003).
92. **03RE194:** REICHERT H., HONKIMÄKI V., SNIGIREV A., ENGEMANN S., DOSCH H., "A new X-ray transmission-reflection scheme for the study of deeply buried interfaces using high-energy microbeams", Physica B **336**, 46-55 (2003).

### ESRF Publications 2002-2003

93. **03QU195:** QUIROS C., ROBACH O., ISERN H., FERRER S., "Magnetic anisotropy of submonolayer Pt films grown on Ni(110)", *Journal of Physics Condensed Matter* **15**, 4279-4285 (2003).
94. **03LO196:** LOA I., KUNC K., SYASSEN K., KRISCH M., MERMET A., HANFLAND M., "Inelastic X-ray scattering in Cs under pressure", *High Pressure Research* **23**, 1-5 (2003).
95. **03BR197:** BRUNELLI M., FITCH A.N., "A glass capillary cell for *in situ* powder X-ray diffraction of condensed volatile compounds. Solid HCFC-123a and HCFC-124", *Journal of Synchrotron Radiation* **10**, 337-339 (2003).
96. **03OV198:** OWENS A., BAVDAZ M., BRAMMERTZ G., GOSTILO V., GRAAFSMA H., KOZOREZOV A., KRUMREY M., LISJUTIN I., PEACOCK A., PUIG A., SIPILA H., ZATOLOKA S., "The X-ray response of TlBr", *Nuclear Instruments and Methods in Physics Research A* **497**, 370-380 (2003).
97. **03FI199:** FILIPPONI A., GIORDANO V.M., DE PANFILIS S., DI CICCO A., PRINCIPI E., TRAPANANTI A., BOROWSKI M., ITIE J.P., "Multichannel detector-collimator for powder diffraction measurements at energy scanning X-ray absorption spectroscopy synchrotron radiation beamlines for high-pressure and high-temperature applications", *Review of Scientific Instruments* **74**, 2654-2663 (2003).
98. **03SO200:** SOLAK H.H., DAVID C., GOBRECHT J., DRAKOPOULOS M., "Real-time observation of electromigration-induced stress changes with imaging X-ray topography", *Journal of Vacuum Science and Technology B* **21**, 1032-1036 (2003).
99. **03JI201:** JIANG X., METZGER T.H., SZTUCKI M., JIANG Z., JIANG W., XIAN D., "Influences of Si spacer layers on the structures of Ge/Si quantum dot bilayers", *Nuclear Instruments and Methods in Physics Research B* **200**, 40-45 (2003).
100. **03ST202:** STANGL J., HESSE A., ROCH T., HOLY V., BAUER G., SCHUELLI T., METZGER T.H., "Structural investigation of semiconductor nanostructures by X-ray techniques", *Nuclear Instruments and Methods in Physics Research B* **200**, 11-23 (2003).
101. **03LU203:** LUDWIG W., BUFFIERE J.Y., SAVELLI S., CLOETENS P., "Study of the interaction of a short fatigue crack with grain boundaries in a cast Al alloy using X-ray microtomography", *Acta Materialia* **51**, 585-598 (2003).
102. **03SZ204:** SZTUCKI M., SCHÜLLI T.U., METZGER T.H., CHAMARD V., SCHUSTER R., SCHUH D., "Strain analysis of a quantum-wire system produced by cleaved edge overgrowth using grazing incidence X-ray diffraction", *Applied Physics Letters* **83**, 872-874 (2003).
103. **03RA205:** RAVELLI R.B.G., SCHRØDER LEIROS H.K., PAN B., CAFFREY M., MCSWEENEY S., "Specific radiation damage can be used to solve macromolecular crystal structures", *Structure* **11**, 217-224 (2003).
104. **03DO206:** DOBSON D.P., CRICHTON W.A., BOUVIER P., VOCADLO L., WOOD I.G., "The equation of state of CsCl-structured FeSi to 40 GPa: Implications for silicon in the earth's core", *Geophysical Research Letters* **30**, 14-1-14-4 (2003).
105. **03GA207:** GASTALDI J., AGLIOZZO S., LETOUBLON A., WANG J., MANCINI L., KLEIN H., HÄRTWIG J., BARUCHEL J., FISHER I.R., SATO T., TSAI A.P., DE BOISSIEU M., "Degree of structural perfection of icosahedral quasicrystalline grains investigated by synchrotron X-ray diffractometry and imaging techniques", *Philosophical Magazine* **83**, 1-29 (2003).
106. **03CU208:** CUIF J.P., DAUPHIN Y., DOUCET J., SALOME M., SUSINI J., "XANES mapping of organic sulfate in three scleractinian coral skeletons", *Geochimica et Cosmochimica Acta* **67**, 75-83 (2003).
107. **03DA209:** DAUPHIN Y., CUIF J.P., DOUCET J., SALOME M., SUSINI J., WILLIAMS C.T., "In situ mapping of growth lines in the calcitic prismatic layers of mollusc shells using X-ray absorption near-edge structure (XANES) spectroscopy at the sulphur K-edge", *Marine Biology* **142**, 299-304 (2003).

108. **03PA210:** PASCARELLI S., AQUILANTI G., CRICHTON W.A., LE BIHAN T., MEZOUAR M., DE PANFILIS S., ITIE J.P., POLIAN A., "Observation of the high-pressure *Pmma* phase in InAs: A combined X-ray absorption and diffraction study", *Europhysics Letters* **61**, 554-560 (2003).
109. **03CR211:** CRICHTON W.A., BOUVIER P., GRZECHNIK A., "The first bulk synthesis of ReO<sub>3</sub>-type tungsten trioxide, WO<sub>3</sub>, from nanometric precursors", *Materials Research Bulletin* **38**, 289-296 (2003).
110. **03PA212:** PAOLASINI L., OULADDIAF B., BERNHOEFT N., SANCHEZ J.P., VULLIET P., LANDER G.H., CANFIELD P., "Magnetic ground state of pure and doped CeFe<sub>2</sub>", *Physical Review Letters* **90**, 057201-1-057201-4 (2003).
111. **03LA213:** LAMBERTI C., PRESTIPINO C., BONINO F., CAPELLO L., BORDIGA S., SPOTO G., ZECCHINA A., DIAZ-MORENO S., CREMASCHI B., GARILLI M., MARSELLA A., CARMELLO D., VIDOTTO S., LEOFANTI G., "The chemistry of the oxychlorination catalyst: An in situ, time-resolved XANES study", *Angewandte Chemie International Edition English* **41**, 2341-2344 (2002).
112. **03HE214:** HESSE A., STANGL J., HOLY V., ROCH T., BAUER G., SCHMIDT O.G., DENKER U., STRUTH B., "Effect of overgrowth on shape, composition, and strain of SiGe islands on Si(001)", *Physical Review B* **66**, 085321-1-085321-8 (2002).
113. **03LA215:** LAGOMARSINO S., CEDOLA A., DI FONZO S., JARK W., MOCELLA V., PELKA J.B., RIEKEL C., "Advances in microdiffraction with X-ray waveguide", *Crystal Research and Technology* **37**, 758-769 (2002).
114. **03WU216:** WULFF M., PLECH A., EYBERT L., RANDLER R., SCHOTTE F., ANFINRUD P., "The realization of sub-nanosecond pump and probe experiments at the ESRF", *Faraday Discussions* **122**, 13-26 (2002).
115. **03DI217:** DINGENOUTS N., MERKLE R., GUO X., NARAYANAN T., GOERIGK G., BALLAUFF M., "Use of anomalous small-angle X-ray scattering for the investigation of highly charged colloids", *Journal of Applied Crystallography* **36**, 578-582 (2003).
116. **03SU218:** SUSINI J., SALOME M., FAYARD B., ORTEGA R., KAULICH B., "The scanning X-ray microprobe at the ESRF "X-ray microscopy" beamline", *Surface Review and Letters* **9**, 203-211 (2002).
117. **03SU219:** SUBIAS G., GARCIA J., SANCHEZ M.C., BLASCO J., PROIETTI M.G., "Soft X-ray absorption spectroscopy (Mn L<sub>2,3</sub> and O K) in mixed valence manganites", *Surface Review and Letters* **9**, 1071-1078 (2002).
118. **03SW220:** SWAMY V., DUBROVINSKY L.S., DUBROVINSKAIA N.A., SIMIONOVICI A.S., DRAKOPOULOS M., DMITRIEV V., WEBER H.P., "Compression behavior of nanocrystalline anatase TiO<sub>2</sub>", *Solid State Communications* **125**, 111-115 (2003).
119. **03CO221:** COLLADO J.A., FRONTERA C., GARCIA-MUNOZ J.L., RITTER C., BRUNELLI M., ARANDA M.A.G., "Room temperature structural and microstructural study for the magneto-conducting La<sub>5/8-x</sub>Pr<sub>x</sub>Ca<sub>3/8</sub>MnO<sub>3</sub> (0 ≤ x ≤ 5/8) series", *Chemistry of Materials* **15**, 167-174 (2003).
120. **03DM222:** DMITRIEV V., SINITSYN V., DILANIAN R., MACHON D., KUZNETSOV A., PONYATOVSKY E.G., LUCAZEAU G., WEBER H.P., "In situ pressure-induced solid-state amorphization in Sm<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, Eu<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub> and Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub> crystals: Chemical decomposition scenario", *Journal of Physics and Chemistry of Solids* **64**, 307-312 (2003).
121. **03SC223:** SCOPIGNO T., YANNOPOULOS S.N., KASTRISSIOS D.T., MONACO G., PONTECORVO E., RUOCCO G., SETTE F., "High frequency acoustic modes in vitreous beryllium fluoride probed by inelastic X-ray scattering", *Journal of Chemical Physics* **118**, 311-316 (2003).
122. **03CH224:** CHABOY J., PLUGARU N., BARTOLOME J., SUBIAS G., "Enhancement of anisotropy in Nd<sub>2</sub>Fe<sub>14</sub>B driven by Eu substitution", *Physical Review B* **67**, 014415-1-014415-4 (2003).

123. **03SA225:** SANCHEZ M.C., SUBIAS G., GARCIA J., BLASCO J., "Cooperative Jahn-Teller phase transition in LaMnO<sub>3</sub> studied by X-ray absorption spectroscopy", *Physical Review Letters* **90**, 045503-1-045503-4 (2003).
124. **03SO226:** SOMOGYI A., DRAKOPOULOS M., VEKEMANS B., VINCZE L., SIMIONOVICI A., ADAMS F., "Effects of beamline components (undulator, monochromator, focusing device) on the beam intensity at ID18F (ESRF)", *Nuclear Instruments and Methods in Physics Research B* **199**, 559-564 (2003).
125. **03AK227:** KVICK Å., "Materials science research at the European Synchrotron Radiation Facility", *Nuclear Instruments and Methods in Physics Research B* **199**, 531-535 (2003).
126. **03ST228:** STEVENSON A.W., GUREYEV T.E., PAGANIN D., WILKINS S.W., WEITKAMP T., SNIGIREV A., RAU C., SNIGIREVA I., YOUN H.S., DOLBANYA I.P., YUN W., LAI B., GARRETT R.F., COOKSON D.J., HYODO K., ANDO M., "Phase-contrast X-ray imaging with synchrotron radiation for materials science applications", *Nuclear Instruments and Methods in Physics Research B* **199**, 427-435 (2003).
127. **03VE229:** VEKEMANS B., VINCZE L., SOMOGYI A., DRAKOPOULOS M., KEMPENAERS L., SIMIONOVICI A., ADAMS F., "Quantitative X-ray fluorescence analysis at the ESRF ID18F microprobe", *Nuclear Instruments and Methods in Physics Research B* **199**, 396-401 (2003).
128. **03ST230:** STIRLING W.G., "Synchrotron X-ray magnetic scattering", *Nuclear Instruments and Methods in Physics Research B* **199**, 295-300 (2003).
129. **03DO231:** DOUCET J., "Applied and industrial activities at the ESRF: Present status and future development", *Nuclear Instruments and Methods in Physics Research B* **199**, 10-14 (2003).
130. **03RI232:** RIEKEL C., "Applications of micro-SAXS/WAXS to study polymer fibers", *Nuclear Instruments and Methods in Physics Research B* **199**, 106-111 (2003).
131. **03CU233:** CUNSOLO A., MONACO G., NARDONE M., PRATESI G., VERBENI R., "Transition from the collective to the single-particle regimes in a quantum fluid", *Physical Review B* **67**, 024507-1-024507-8 (2003).
132. **03DA234:** D'ASTUTO M., MANG P.K., GIURA P., SHUKLA A., MIRONE A., KRISCH M., SETTE F., GHIGNA P., BRADEN M., GREVEN M., "Electron-phonon interaction in N-doped cuprates: An inelastic X-ray scattering study", *International Journal of Modern Physics B* **17**, 484-492 (2003).
133. **03HA235:** HAMILTON M.A., METZGER T.H., MAZUELAS A., BUSLAPS T., "A focusing crystal analyser for the rejection of inelastic X-ray scattering", *Journal of Synchrotron Radiation* **10**, 255-259 (2003).
134. **03AD236:** ADAM J.F., ELLEAUME H., LE DUC G., CORDE S., CHARVET A.M., TROPRES I., LE BAS J.F., ESTEVE F., "Absolute cerebral blood volume and blood flow measurements based on synchrotron radiation quantitative computed tomography", *Journal of Cerebral Blood Flow and Metabolism* **23**, 499-512 (2003).
135. **03NE237:** NEUHÄUSLER U., SCHNEIDER G., LUDWIG W., MEYER M.A., ZSCHECH E., HAMBACH D., "X-ray microscopy in Zernike phase contrast mode at 4 keV photon energy with 60 nm resolution", *Journal of Physics D* **36**, A79-A82 (2003).
136. **03CO238:** COLLET E., LEMEE-CAILLEAU M.H., BURON-LE COINTE M., CAILLEAU H., WULFF M., LUTY T., KOSHIHARA S., MEYER M., TOUPET L., RABILLER P., TECHERT S., "Laser-induced ferroelectric structural order in an organic charge-transfer crystal", *Science* **300**, 612-615 (2003).
137. **03BR239:** BRÄUER-KRISCH E., BRAVIN A., LERCH M., ROSENFELD A., STEPANEK J., DI MICHIEL M., LAISSUE J.A., "MOSFET dosimetry for microbeam radiation therapy at the European Synchrotron Radiation Facility", *Medical Physics* **30**, 583-589 (2003).

138. **03PA240:** PADOVANI S., D'ACAPITO F., SADA C., CATTARUZZA E., GONELLA F., ARGIOLOS N., BAZZAN M., MAURIZIO C., MAZZOLDI P., "Er<sup>3+</sup>-Li<sup>+</sup> ion exchange in lithium niobate crystals: An EXAFS study", *European Physical Journal B* **32**, 157-161 (2003).
139. **03SH241:** SHUKLA A., RUEFF J.P., BADRO J., VANKO G., MATTILA A., DE GROOT F.M.F., SETTE F., "Charge transfer at very high pressure in NiO", *Physical Review B* **67**, 081101-1-081101-4 (2003).
140. **03GA242:** GAUDRY E., KIRATISIN A., SAINCTAVIT P., BROUDER C., MAURI F., RAMOS A., "Structural and electronic relaxations around substitutional Cr<sup>3+</sup> and Fe<sup>3+</sup> ions in corundum", *Physical Review B* **67**, 094108-1-094108-10 (2003).
141. **03MA243:** MADSEN A., ALS-NIELSEN J., GRUEBEL G., "Viscosity of a liquid crystal near the nematic–smectic A phase transition", *Physical Review Letters* **90**, 085701-1-085701-4 (2003).
142. **03PA244:** PANINE P., GRADZIELSKI M., NARAYANAN T., "Combined rheometry and small-angle X-ray scattering", *Review of Scientific Instruments* **74**, 2451-2455 (2003).
143. **03RO245:** ROTH S.V., BURGHAMMER M., RIEKEL C., MÜLLER-BUSCHBAUM P., DIETHERT A., PANAGIOTOU P., WALTER H., "Self-assembled gradient nanoparticle-polymer multilayers investigated by an advanced characterization method: Microbeam grazing incidence X-ray scattering", *Applied Physics Letters* **82**, 1935-1937 (2003).
144. **03NE246:** NEUHÄUSLER U., FENG H., JONES K.W., "Characterization of sulfur in New York/New Jersey waterway sediment", *Journal de Physique IV* **104**, 439-442 (2003).
145. **03MA247:** MACHON D., SINITSYN V., DMITRIEV V.P., BDIKIN I.K., DUBROVINSKY L.S., KULESHOV I.V., PONYATOVSKY E.G., WEBER H.P., "Structural transitions in Cu<sub>2</sub>O at pressures up to 11 GPa", *Journal of Physics Condensed Matter* **15**, 7227-7235 (2003).
146. **03DU248:** DUBROVINSKY L., DUBROVINSKAIA N.A., MCCAMMON C., ROZENBERG G.K., AHUJA R., OSORIO-GUILLEN J.M., DMITRIEV V., WEBER H.P., LE BIHAN T., JOHANSSON B., "The structure of the metallic high-pressure Fe<sub>3</sub>O<sub>4</sub> polymorph: Experimental and theoretical study", *Journal of Physics Condensed Matter* **15**, 7697-7706 (2003).
147. **03BR249:** BRUNELLI M., WRIGHT J.P., VAUGHAN G.B.M., MORA A.J., FITCH A.N., "Solving larger molecular crystal structures from powder diffraction data by exploiting anisotropic thermal expansion", *Angewandte Chemie International Edition English* **42**, 2029-2032 (2003).
148. **03DA250:** D'ACAPITO F., DAVOLI I., GHIGNA P., MOBILIO S., "The ReFLIXAFS station at the GILDA beamline (BM08) of ESRF", *Journal of Synchrotron Radiation* **10**, 260-264 (2003).
149. **03ME251:** MENEGHINI C., GARCIA PRIETO A., FDEZ-GUBIEDA M.L., MOBILIO S., "Time-resolved X-ray diffraction experiments during annealing of Co<sub>15</sub>Cu<sub>85</sub> granular alloy", *Journal of Magnetism and Magnetic Materials* **262**, 92-96 (2003).
150. **03BA252:** BADRO J., FIQUET G., GUYOT F., RUEFF J.P., STRUZHUKIN V.V., VANKO G., MONACO G., "Iron partitioning in earth's mantle: Toward a deep lower mantle discontinuity", *Science* **300**, 789-791 (2003).
151. **03BR253:** BREIBY D.W., SAMUELSEN E.J., GROENENDAAL L.B., STRUTH B., "Smectic structures in electrochemically prepared poly(3, 4- ethlenedioxythiophene) films", *Journal of Polymer Science B* **41**, 945-952 (2003).
152. **03BR254:** BREIBY D.W., SAMUELSEN E.J., KONOVALOV O., STRUTH B., "Drying behaviour of thick poly(octylthiophene) solutions", *Synthetic Metals* **135-136**, 345-346 (2003).
153. **03BR255:** BREIBY D.W., SAMUELSEN E.J., KONOVALOV O., STRUTH B., "Self-organization in nanoscopic poly(alkylthiophene) films on water", *Synthetic Metals* **135-136**, 363-364 (2003).
154. **03TA256:** TAKENOBU T., CHI D.H., MARGADONNA S., PRASSIDES K., KUBOZONO Y., FITCH A.N., KATO K., IWASA Y., "Synthesis, structure, and magnetic properties of the fullerene-based ferromagnets Eu<sub>3</sub>C<sub>70</sub> and Eu<sub>9</sub>C<sub>70</sub>", *Journal of the American Chemical Society* **125**, 1897-1904 (2003).

155. **03MU257:** MÜLLER-BUSCHBAUM P., ROTH S.V., BURGHAMMER M., DIETHERT A., PANAGIOTOU P., RIEKEL C., "Multiple-scaled polymer surfaces investigated with micro-focus grazing-incidence small-angle X-ray scattering", *Europhysics Letters* **61**, 639-645 (2003).
156. **03AR258:** ARZEL L., HEHLEN B., DENOYER F., CURRAT R., LISS K.D., COURTENS E., "Observation of a sample-dependent 37 K anomaly on the lattice parameters of strontium titanate", *Europhysics Letters* **61**, 653-659 (2003).
157. **03VE259:** VERICAT C., VELA M.E., ANDREASEN G.A., SALVAREZZA R.C., BORGATTI F., FELICI R., LEE T.L., RENNER F., ZEGENHAGEN J., MARTIN-GAGO J.A., "Following adsorption kinetics at electrolyte/metal interfaces through crystal truncation scattering: Sulfur on Au(111)", *Physical Review Letters* **90**, 075506-1-075506-4 (2003).
158. **03RU260:** RUFFLE B., FORET M., COURTENS E., VACHER R., MONACO G., "Observation of the onset of strong scattering on high frequency acoustic phonons in densified silica glass", *Physical Review Letters* **90**, 095502-1-095502-4 (2003).
159. **03CA261:** CARDOSO-GIL R., NIEWA R., SCHMIDT M., ARMBRÜSTER M., HANFLAND M., KLEMENTIEV K., SCHWARZ U., "Pressure-induced changes of the crystal structure of  $\text{Eu}_4\text{P}_3$ ", *Zeitschrift fuer Anorganische und Allgemeine Chemie* **629**, 454-458 (2003).
160. **03NO262:** NÖHAMMER B., HOSZOWSKA J., FREUND A.K., DAVID C., "Diamond planar refractive lenses for third- and fourth-generation X-ray sources", *Journal of Synchrotron Radiation* **10**, 168-171 (2003).
161. **03BO263:** BOUCHENOIRE L., BROWN S.D., THOMPSON P., DUFFY J.A., TAYLOR J.W., COOPER M.J., "Performance of phase plates on the XMaS beamline at the ESRF", *Journal of Synchrotron Radiation* **10**, 172-176 (2003).
162. **03MA264:** MARTORANA A., DEGANELLO G., LONGO A., DEGANELLO F., LIOTTA L., MACALUSO A., PANTALEO G., BALERNA A., MENEGHINI C., MOBILIO S., "Time-resolved X-ray powder diffraction on a three-way catalyst at the GILDA beamline", *Journal of Synchrotron Radiation* **10**, 177-182 (2003).
163. **03KO265:** KOCSIS M., SOMOGYI A., "Miniature ionization chamber detector developed for X-ray microprobe measurements", *Journal of Synchrotron Radiation* **10**, 187-190 (2003).
164. **03RA266:** RABAGLINO E., BARUCHEL J., BOLLER E., ELMOUTAOUAKKIL A., FERRERO C., RONCHI C., WISS T., "Study by microtomography of 3D porosity networks in irradiated beryllium", *Nuclear Instruments and Methods in Physics Research B* **200**, 352-357 (2003).
165. **03MO267:** MORA A.J., FITCH A.N., RAMIREZ B.M., DELGADO G.E., BRUNELLI M., WRIGHT J., "Structure of lithium benzilate hemihydrate solved by simulated annealing and difference Fourier synthesis from powder data", *Acta Crystallographica B* **59**, 378-383 (2003).
166. **03GH268:** GHIGNA P., SPINOLO G., ALESSANDRI I., DAVOLI I., D'ACAPITO F., "Do we have a probe for the initial stages of solid state reactions ?", *Physical Chemistry - Chemical Physics* **5**, 2244-2247 (2003).
167. **03GA269:** GARCIA-MUNOZ J.L., FRONTERA C., ARANDA M.A.G., RITTER C., LLOBET A., RESPAUD M., GOIRAN M., RAKOTO H., MASSON O., VANACKEN J., BROTO J.M., "Charge and orbital order in rare-earth and Bi manganites: A comparison", *Journal of Solid State Chemistry* **171**, 84-89 (2003).
168. **03SC270:** SCHROER C.G., KUHLMANN M., GÜNZLER T.F., LENGELER B., RICHWIN M., GRIESEBOCK B., LÜTZENKIRCHEN-HECHT D., FRAHM R., ZIEGLER E., MASHAYEKHI A., HAEFFNER D.R., GRUNWALDT J.D., BAIKER A., "Mapping the chemical states of an element inside a sample using tomographic x-ray absorption spectroscopy", *Applied Physics Letters* **82**, 3360-3362 (2003).
169. **03MI271:** MINTOVA S., REINELT M., METZGER T.H., SENKER J., BEIN T., "Pure silica BETA colloidal zeolite assembled in thin films", *Chemical Communications* , 326-327 (2003).

170. **03HR272:** HRDY J., HOSZOWSKA J., MOCUTA C., ARTEMIEV N., FREUND A., "Diffractive refractive optics: The possibility of sagittal focusing in Laue-case diffraction", *Journal of Synchrotron Radiation* **10**, 233-235 (2003).
171. **03DE273:** DE ANDRES A., RUBIO J., CASTRO G., TABOADA S., MARTINEZ J.L., COLINO J.M., "Structural and magnetic properties of ultrathin epitaxial  $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$  manganite films: Strain versus finite size effects", *Applied Physics Letters* **83**, 713-715 (2003).
172. **03PR274:** PRZENIOSLO R., VAN BEEK W., SOSNOWSKA I., "Phase coexistence in annealed  $\text{CaMn}_7\text{O}_{12}$ ", *Solid State Communications* **126**, 485-488 (2003).
173. **03LI275:** LISS K.D., KAISER M., HLINKA J., DENOYER F., HOCK R., CURRAT R., "Kinetics of the field induced commensurate to ferro-electric phase transition in thiourea", *Journal of Physics D* **36**, A172-A176 (2003).
174. **03QU276:** QUIROS C., ROBACH O., ISERN H., ORDEJON P., FERRER S., "Compressibility of CO adsorbed on Ni(1 1 1) from  $10^{-6}$  mbar to 1.2 bar ambient CO pressures investigated with X-ray diffraction", *Surface Science* **522**, 161-166 (2003).
175. **03GA277:** GARCIA PRIETO A., FDEZ-GUBIEDA M.L., MENEGHINI C., GARCIA-ARRIBAS A., "In situ observation of the structural changes induced by thermal annealing on melt-spun  $\text{Co}_{15}\text{Cu}_{85}$  granular alloys", *Journal of Magnetism and Magnetic Materials* **254-255**, 82-84 (2003).
176. **03PA278:** PAGOT E., CLOETENS P., FIEDLER S., BRAVIN A., COAN P., BARUCHEL J., HÄRTWIG J., THOMLINSON W., "A method to extract quantitative information in analyzer-based X-ray phase contrast imaging", *Applied Physics Letters* **82**, 3421-3423 (2003).
177. **03WI279:** WILHELM F., POULOPOULOS P., SCHERZ A., WENDE H., BABERSCHKE K., ANGELAKERIS M., FLEVARIS N.K., GOULON J., ROGALEV A., "Interface magnetism in  $3d/5d$  multilayers probed by X-ray magnetic circular dichroism", *Physica Status Solidi (a)* **196**, 33-36 (2003).
178. **03CO280:** CORDE S., BALOSSO J., ELLEAUME H., RENIER M., JOUBERT A., BISTON M.C., ADAM J.F., CHARVET A.M., BROCHARD T., LE BAS J.F., ESTEVE F., FORAY N., "Synchrotron photoactivation of cisplatin elicits an extra number of DNA breaks that stimulate RAD51-mediated repair pathways", *Cancer Research* **63**, 3221-3227 (2003).
179. **03LE281:** LE BIHAN T., HEATHMAN S., IDIRI M., LANDER G.H., WILLS J.M., LAWSON A.C., LINDBAUM A., "Structural behavior of  $\alpha$ -uranium with pressures to 100 GPa", *Physical Review B* **67**, 134102-1-134102-6 (2003).
180. **03TJ282:** TJERNBERG O., TJENG L.H., STEENEKEN P.G., GHIRINGHELLI G., NUGROHO A.A., MENOVSKY A.A., BROOKES N.B., "Electrons, holes, and spin in  $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_{4-\delta}$ ", *Physical Review B* **67**, 100501-1-100501-4 (2003).
181. **03MA283:** MAURON O., DOUSSE J.C., BAECHLER S., BERSSET M., MAILLARD Y.P., RABOUD P.A., HOSZOWSKA J., "Reexamination of L3 and M1 atomic-level widths of elements  $54 < Z < 77$ ", *Physical Review A* **67**, 032506-1-032506-12 (2003).
182. **03SI284:** SIU K.K.W., NIKULIN A.Y., WELLS P.B., HARVEY E., BIGAULT T., FREUND A.K., ISHIKAWA T., "Unambiguous X-ray phase retrieval from Fraunhofer diffraction data", *Journal of Applied Physics* **93**, 5161-5166 (2003).
183. **03UR285:** URBAN V., PANINE P., PONCHUT C., BOESECKE P., NARAYANAN T., "Two-dimensional camera for millisecond range time-resolved small- and wide-angle X-ray scattering", *Journal of Applied Crystallography* **36**, 809-811 (2003).
184. **03BR286:** BRAS W., DOLBANYA I.P., DETOLLENAERE D., VAN TOL R., MALFOIS M., GREAVES G.N., RYAN A.J., HEELEY E.L., "Recent experiments on a combined small-angle/wide-angle X-ray scattering beam line at the ESRF", *Journal of Applied Crystallography* **36**, 791-794 (2003).
185. **03PO287:** PONTONI D., NARAYANAN T., "Ultra-small-angle X-ray scattering studies of attractive colloidal glass transition", *Journal of Applied Crystallography* **36**, 787-790 (2003).

186. **03LI288:** LIVET F., BLEY F., EHRBURGER-DOLLE F., GEISSLER E., LEBOLLOCH D., SCHULLI T., "Ultra small-angle X-ray scattering: Conditions, limits and results in speckle experiments", *Journal of Applied Crystallography* **36**, 774-777 (2003).
187. **03MA289:** MAURIZIO C., LONGO A., MARTORANA A., CATTARUZZA E., D'ACAPITO F., GONELLA F., DE JULIAN C., MATTEI G., MAZZOLDI P., PADOVANI S., BOESECKE P., "Grazing-incidence small-angle X-ray scattering and X-ray diffraction from magnetic clusters obtained by Co + Ni sequential ion implantation in silica", *Journal of Applied Crystallography* **36**, 732-735 (2003).
188. **03NO290:** NOVIKOVA N.N., ZHELUDEVA S., KONOVALOV O.V., KOVALCHUK M.V., STEPINA N.D., MYAGKOV I.V., GODOVSKY Y.K., MAKAROVA N.N., TERESCHENKO E.Y., YANUSOVA L.G., "Total reflection X-ray fluorescence study of Langmuir monolayers on water surface", *Journal of Applied Crystallography* **36**, 727-731 (2003).
189. **03ME291:** MENEAU F., CRISTOL S., SANKAR G., DOLBANYA I.P., BRAS W., CATLOW C.R.A., THOMAS J.M., GREAVES G.N., "In situ study of the formation of CdS nanoparticles by small-angle X-ray scattering", *Journal of Applied Crystallography* **36**, 718-721 (2003).
190. **03RO292:** ROTH S.V., BURGHAMMER M., FERRERO C., DIETHERT A., MÜLLER-BUSCHBAUM P., "Fatigue behaviour of industrial polymers - a microbeam small-angle X-ray scattering investigation", *Journal of Applied Crystallography* **36**, 684-688 (2003).
191. **03BI293:** BISTON M.C., CORDE S., CAMUS E., MARTI-BATTLE R., ESTEVE F., BALOSSO J., "An objective method to measure cell survival by computer-assisted image processing of numeric images of Petri dishes", *Physics in Medicine and Biology* **48**, 1551-1563 (2003).
192. **03WU294:** WUNSCHER M., DINNEBIER R.E., CARLSON S., BERNATOWICZ P., VAN SMAALEN S., "Influence of the molecular structures on the high-pressure and low-temperature phase transitions of plastic crystals", *Acta Crystallographica B* **59**, 60-71 (2003).
193. **03JI295:** JIANG Q., THOMAS P.A., WALKER D., HUTTON K.B., WARD R.C.C., PERNOT P., BARUCHEL J., "High potassium  $\text{KTiPO}_4$  crystals for the fabrication of quasi-phase matched devices", *Journal of Physics D* **36**, 1236-1241 (2003).
194. **03BR296:** BROWN S.D., BEESLEY A., HERRING A., MANNIX D., THOMAS M.F., THOMPSON P., BOUCHENOIRE L., LANGRIDGE S., LANDER G.H., STIRLING W.G., MIRONE A., WARD R.C.C., WELLS M.R., ZOCHOWSKI S.W., "Resonant magnetic reflectivity from U/Fe multilayers", *Journal of Applied Physics* **93**, 6519-6521 (2003).
195. **03CH297:** CHAMARD V., METZGER T.H., SZTUCKI M., HOLY V., TOLAN M., BELLET-AMALRIC E., ADELMANN C., DAUDIN B., MARIETTE H., "On the driving forces for the vertical alignment in nitride quantum dot multilayers", *Europhysics Letters* **63**, 268-274 (2003).
196. **03CA298:** CAMARERO J., PENNEC Y., VOGEL J., BONFIM M., PIZZINI S., ERNULT F., FETTAR F., GARCIA F., LANCON F., BILLARD L., DIENY B., TAGLIAFERRI A., BROOKES N.B., "Perpendicular interlayer coupling in  $\text{Ni}_{80}\text{Fe}_{20}/\text{NiO}/\text{Co}$  trilayers", *Physical Review Letters* **91**, 027201-1-027201-4 (2003).
197. **03WI299:** WILKINS S.B., SPENCER P.D., BEALE T.A.W., HATTON P.D., ZIMMERMANN M.V., BROWN S.D., PRABHAKARAN D., BOOTHROYD A.T., "Charge ordering and structural distortions at low temperature in  $\text{La}_{2-2x}\text{Sr}_{1+2x}\text{Mn}_2\text{O}_7$  ( $x = 0.475$  and  $0.5$ )", *Physical Review B* **67**, 205110-1-205110-9 (2003).
198. **03KE300:** KEEN D.A., HULL S., BARNES A.C., BERASTEGUI P., CRICHTON W.A., MADDEN P.A., TUCKER M.G., WILSON M., "Nature of the superionic transition in  $\text{Ag}^+$  and  $\text{Cu}^+$  halides", *Physical Review B* **68**, 014117-1-014117-11 (2003).
199. **03SU301:** SUSINI J., SALOME M., NEUHÄUSLER U., DHEZ O., EICHERT D., FAYARD B., SOMOGYI A., BOHIC S., BLEUET P., MARTINEZ-CRIADO G., TUCOULOU R., SIMIONOVICI A., BARRETT R., DRAKOPOULOS M., "The X-ray microscopy and micro-spectroscopy facility at the ESRF", *Synchrotron Radiation News* **16**, 35-43 (2003).

200. **03KA302:** KAULICH B., SUSINI J., DAVID C., DI FABRIZIO E., MORRISON G.R., THIEME J., WILHEIN T., KOVAC J., BACESCU D., SALOME M., DHEZ O., WEITKAMP T., CABRINI S., GOSPERINI A., CHARALAMBOUS P., VOGT U., PODNAR M., KISKINOVA M., "TwinMic: Combined scanning and full-field imaging microscopy with novel contrast mechanisms", *Synchrotron Radiation News* **16**, 49-52 (2003).
201. **03GO303:** GOLOSIO B., SIMIONOVICI A., SOMOGYI A., LEMELLE L., CHUKALINA M., BRUNETTI A., "Internal elemental microanalysis combining X-ray fluorescence, Compton and transmission tomography", *Journal of Applied Physics* **94**, 145-156 (2003).
202. **03MA304:** MAURIZIO C., MATTEI G., GARCIA M.A., BORSELLA E., MAZZOLDI P., QUARANTA A., D'ACAPITO F., "Towards controllable optical response of GaN quantum dots in alumina", *European Physical Journal D* **25**, 25-29 (2003).
203. **03DI305:** DINNEBIER R.E., CARLSON S., HANFLAND M., JANSEN M., "Bulk moduli and high-pressure crystal structures of minium,  $Pb_3O_4$ , determined by X-ray powder diffraction", *American Mineralogist* **88**, 996-1002 (2003).
204. **03NO306:** NORAGER S., ARENT S., BJÖRNBERG O., OTTOSENS M., LO LEGGIO L., JENSEN K.F., LARSEN S., "*Lactococcus lactis* dihydroorotate dehydrogenase A mutants reveal important facets of the enzymatic function", *Journal of Biological Chemistry* **278**, 28812-28822 (2003).
205. **03GR312:** GREDIN P., CORBEL G., WRIGHT J.P., DUPONT N., DE KOZAK A., "The crystal structure of  $Ba_3Cu_2Al_2F_{16}$ : A relative of  $Ba_4Cu_2Al_3F_{21}$ ", *Zeitschrift fuer Anorganische und Allgemeine Chemie* **629**, 1960-1964 (2003).
206. **03ST342:** STANGE M., YARTYS V.A., MAEHLLEN J.P., HANFLAND M., "High pressure synchrotron XRD study of the pressure induced structural changes in  $LaNiInD_{1.63-x}$ ", *Journal of Alloys and Compounds* **356-357**, 395-399 (2003).
207. **03PR343:** PRUZAN P., CHERVIN J.C., WOLANIN E., CANNY B., GAUTHIER M., HANFLAND M., "Phase diagram of ice in the VII-VIII-X domain. Vibrational and structure data for strongly compressed ice VIII", *Journal of Raman spectroscopy* **34**, 591-610 (2003).
208. **03LO344:** LOIDL D., PETERLIK H., MÜLLER M., RIEKEL C., PARIS O., "Elastic moduli of nanocrystallites in carbon fibers measured by in-situ X-ray microbeam diffraction", *Carbon* **41**, 563-570 (2003).
209. **03UR345:** URIARTE J.L., YAVARI A.R., SURINACH S., RIZZI P., HEUNEN G., BARICCO M., BARO M.D., KVICK Å., "Properties of FeNiB-based metallic glasses with primary BCC and FCC crystallisation products", *Journal of Magnetism and Magnetic Materials* **254-255**, 532-534 (2003).
210. **03LI346:** LINDNER J., SCHERZ A., POULOPOULOS P., RÜDT C., ANISIMOV A.N., WENDE H., BABERSCHKE K., BLOMQUIST P., WÄPPLING R., WILHELM F., BROOKES N.B., "Ultrathin Fe-limit in Fe/V(0 0 1) superlattices", *Journal of Magnetism and Magnetic Materials* **256**, 404-411 (2003).
211. **03SC347:** SCHELL N., BÖTTIGER J., MATZ W., CHEVALIER J., "Growth mode and texture development in TiN films during magnetron sputtering – An in situ synchrotron radiation study", *Nuclear Instruments and Methods in Physics Research B* **199**, 133-138 (2003).
212. **03MA348:** MARTIN P., RIPERT M., PETIT T., REICH T., HENNIG C., D'ACAPITO F., HAZEMANN J.L., PROUX O., "A XAS study of the local environments of cations in  $(U, Ce)O_2$ ", *Journal of Nuclear Materials* **312**, 103-110 (2003).
213. **03OM349:** O'MALLEY R., VOLLMER A., LEE J.R.I., HARVEY I., HEADSPITH J., DIAZ-MORENO S., RAYMENT T., "Time-resolved studies of diffusion via energy dispersive X-ray absorption spectroscopy", *Electrochemistry Communications* **5**, 1-5 (2003).
214. **03PL350:** PLECH A., KÜRBITZ S., BERG K.J., GRAENER H., BERG G., GRESILLON S., KAEMPFE M., FELDMANN J., WULFF M., VON PLESSSEN G., "Time-resolved X-ray diffraction on laser-excited metal nanoparticles", *Europhysics Letters* **61**, 762-768 (2003).

215. **03GA351:** GALES L., CARDOSO I., FAYARD B., QUINTANILHA A., SARAIVA M.J., DAMAS A.M., "X-ray absorption spectroscopy reveals a substantial increase of sulfur oxidation in transthyretin (TTR) upon fibrillization", *Journal of Biological Chemistry* **278**, 11654-11660 (2003).
216. **03RO352:** ROTH S., BURGHAMMER M., JANOTTA A., RIEKEL C., "Rotational disorder in poly(*p*-phenylene terephthalamide) fibers by X-ray diffraction with a 100 nm beam", *Macromolecules* **36**, 1585-1593 (2003).
217. **03HE353:** HEINES P., KELLER H.L., BOUVIER P., HANFLAND M., "Neue Alkalimetall-halogenopalladate(II) mit Iodeinlagerung - Kristallstrukturen, Phasenubergänge und Spektroskopie", *Zeitschrift fuer Anorganische und Allgemeine Chemie* **629**, 545-550 (2003).
218. **03PR354:** PRAKAPENKA V.B., DUBROVINSKY L.S., SHEN G., RIVERS M.L., SUTTON S.R., DMITRIEV V., WEBER H.P., LE BIHAN T., "á-PbO<sub>2</sub>-type high-pressure polymorph of GeO<sub>2</sub>", *Physical Review B* **67**, 132101-1-132101-4 (2003).
219. **03MA355:** MARTINETTO P., DOORYHEE E., WALTER P., ANNE M., TSOUCARIS G., "Synchrotron et matériaux du patrimoine : les cosmétiques de l'Égypte ancienne", *Bulletin de la Societe Francaise de Physique* **138**, 4-7 (2003).
220. **03RA356:** RAMOS S., NEILSON G.W., BARNES A.C., CAPITAN M.J., "Anomalous X-ray diffraction studies of Sr<sup>2+</sup> hydration in aqueous solution", *Journal of Chemical Physics* **118**, 5542-5546 (2003).
221. **03AN357:** ANDRAULT D., ANGEL R.J., MOSENFELDER J.L., LE BIHAN T., "Equation of state of stishovite to lower mantle pressures", *American Mineralogist* **88**, 301-307 (2003).
222. **03DU358:** DUBROVINSKY L., DUBROVINSKAIA N., LANGENHORST F., DOBSON D.P., RUBIE D.C., GESSMANN C., ABRIKOSOV I.A., JOHANSSON B., BAYKOV V.I., VITOS L., LE BIHAN T., CRICHTON W.A., DMITRIEV V., WEBER H.P., "Iron-silica interaction at extreme conditions and the electrically conducting layer at the base of earth's mantle", *Nature* **422**, 58-61 (2003).
223. **03BR359:** BRAICOVICH L., TAGLIAFERRI A., VAN DER LAAN G., GHIRINGHELLI G., BROOKES N.B., "Sum rules in X-ray resonant Raman scattering: Recovering the Co ground state information in CoFe<sub>2</sub>O<sub>4</sub> as a test case", *Physical Review Letters* **90**, 117401-1-117404 (2003).
224. **03CA360:** CAMARERO J., PENNEC Y., VOGEL J., PIZZINI S., CARTIER M., FETTAR F., ERNULT F., TAGLIAFERRI A., BROOKES N.B., DIENY B., "Field dependent exchange coupling in NiO/Co bilayers", *Physical Review B* **67**, 020413-1-020413-4 (2003).
225. **03CH361:** CHUMAKOV A.I., RÜFFER R., LEUPOLD O., SERGUEEV I., "Insight to dynamics of molecules with nuclear inelastic scattering", *Structural Chemistry* **14**, 109-119 (2003).
226. **03SH362:** SHILO D., LAKIN E., ZOLOTUYABKO E., HÄRTWIG J., BARUCHEL J., "X-ray imaging of surface acoustic waves generated in semiconductor crystals by an external transducer", *Applied Physics Letters* **82**, 1374-1376 (2003).
227. **03SC363:** SCHROER C.G., KUHLMANN M., HUNGER U.T., GÜNZLER T.F., KURAPOVA O., FESTE S., FREHSE F., LENGELER B., DRAKOPOULOS M., SOMOGYI A., SIMIONOVICI A.S., SNIGIREV A., SNIGIREVA I., SCHUG C., SCHRÖDER W.H., "Nanofocusing parabolic refractive X-ray lenses", *Applied Physics Letters* **82**, 1485-1487 (2003).
228. **03PA364:** PANINE P., URBAN V., BOESECKE P., NARAYANAN T., "Combined small- and wide-angle X-ray scattering study of early stages of polymer crystallization", *Journal of Applied Crystallography* **36**, 991-994 (2003).
229. **03YA365:** YAVARI A.R., DE CASTRO J.F.R., VAUGHAN G., HEUNEN G., "Structural evolution and metastable phase detection in MgH<sub>2</sub>-5%NbH nanocomposite during in-situ H-desorption in a synchrotron beam", *Journal of Alloys and Compounds* **353**, 246-251 (2003).
230. **03MA366:** MASSON O., DOORYHEE E., FITCH A.N., "Instrument line-profile synthesis in high-resolution synchrotron powder diffraction", *Journal of Applied Crystallography* **36**, 286-294 (2003).

231. **03LO367:** LORIMIER J., BERNARD F., NIEPCE J.C., GUIGUE-MILLOT N., ISNARD O., BERAR J.F., "Mixed valences in nanometric ferrites investigated by resonant powder diffraction", *Journal of Applied Crystallography* **36**, 301-307 (2003).
232. **03BE368:** BELLET D., GORGES B., DALLERY A., BERNARD P., PEREIRO E., BARUCHEL J., "A 1300 K furnace for *in situ* X-ray microtomography", *Journal of Applied Crystallography* **36**, 366-367 (2003).
233. **03DA369:** DANNEAU R., AYARI A., RIDEAU D., REQUARDT H., LORENZO J.E., ORTEGA L., MONCEAU P., CURRAT R., GRÜBEL G., "Danneau et al. Reply: "Motional ordering of a charge-density wave in the sliding state"", *Physical Review Letters* **91**, 049704-1 (2003).
234. **03GU370:** GUTT C., GHADERI T., CHAMARD V., MADSEN A., SEYDEL T., TOLAN M., SPRUNG M., GRÜBEL G., SINHA S.K., "Observation of heterodyne mixing in surface X-ray photon correlation spectroscopy experiments", *Physical Review Letters* **91**, 076104-1-076104-4 (2003).
235. **03GA371:** GARCIA PRIETO A., FDEZ-GUBIEDA M.L., MENEGHINI C., GARCIA-ARRIBAS A., MOBILIO S., "Microstructural and magnetic evolution upon annealing of giant magnetoresistance melt-spun Co-Cu granular alloys", *Physical Review B* **67**, 224415-1-224415-11 (2003).
236. **03RO372:** ROBACH O., QUIROS C., ISERN H., STEADMAN P., PETERS K.F., FERRER S., "Stacking reversal as a source of perpendicular magnetic anisotropy in Ni-Pt multilayers", *Physical Review B* **67**, 220405-1-220405-4 (2003).
237. **03RO373:** ROBACH O., QUIROS C., VALVIDARES S.M., WALKER C.J., FERRER S., "Structure and Pt magnetism of FePt nanoparticles investigated with X-ray diffraction", *Journal of Magnetism and Magnetic Materials* **264**, 202-208 (2003).
238. **03ST374:** STRUTH B., HOFMEISTER W., SMILGIES D.M., KONOVALOV O., "Analysis of the cleaved topaz (001) surface", *Analytical and Bioanalytical Chemistry* **376**, 639-641 (2003).
239. **03SE375:** SEYDEL T., MADSEN A., SPRUNG M., TOLAN M., GRÜBEL G., PRESS W., "Setup for *in situ* surface investigations of the liquid/glass transition with (coherent) X-rays", *Review of Scientific Instruments* **74**, 4033-4040 (2003).
240. **03CE376:** CELESTIAN A.J., PARISE J.B., TRIPATHI A., KVICK Å., VAUGHAN G.M.B., "(K<sub>4</sub>Li<sub>4</sub>)Al<sub>8</sub>Ge<sub>8</sub>O<sub>32</sub>·8H<sub>2</sub>O: An Li<sup>+</sup>-exchanged potassium aluminogermanate with the zeolite gismondine (GIS) topology", *Acta Crystallographica C* **59**, i74-i76 (2003).
241. **03GU377:** GUENEE L., FAVRE-NICOLIN V., YVON K., "Synthesis, crystal structure and hydrogenation properties of the ternary compounds LaNi<sub>4</sub>Mg and NdNi<sub>4</sub>Mg", *Journal of Alloys and Compounds* **348**, 129-137 (2003).
242. **03ME378:** MERIGOUX C., BRIKI F., SARROT-REYNAULD F., SALOME M., FAYARD B., SUSINI J., DOUCET J., "Evidence for various calcium sites in human hair shaft revealed by sub-micrometer X-ray fluorescence", *Biochimica et Biophysica Acta* **1619**, 53-58 (2003).
243. **03SC379:** SCHOTTE F., LIM M., JACKSON T.A., SMIRNOV A.V., SOMAN J., OLSON J.S., PHILLIPS JR G.N., WULFF M., ANFINRUD P.A., "Watching a protein as it functions with 150-ps time-resolved X-ray crystallography", *Science* **300**, 1944-1947 (2003).
244. **03ST380:** STEENEKEN P.G., TJENG L.H., SAWATZKY G.A., TANAKA A., TJERNBERG O., GHIRINGHELLI G., BROOKES N.B., NUGROHO A.A., MENOVSKY A.A., "Crossing the gap from p- to n-type doping: Nature of the states near the chemical potential in La<sub>2-x</sub>Sr<sub>x</sub>CuO<sub>4</sub> and Nd<sub>2-x</sub>Ce<sub>x</sub>CuO<sub>4-δ</sub>", *Physical Review Letters* **90**, 247005-1-247005-5 (2003).
245. **03CH381:** CHAABANE B., KREISEL J., DKHIL B., BOUVIER P., MEZOUAR M., "Pressure-induced suppression of the diffuse scattering in the model relaxor ferroelectric PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>", *Physical Review Letters* **90**, 257601-1-257601-4 (2003).
246. **03HE382:** HEATHMAN S., IDIRI M., REBIZANT J., BOULET P., NORMILE P.S., HAVELA L., SECHOVSKY V., LE BIHAN T., "UPd<sub>3</sub> under high pressure: Lattice properties", *Physical Review B* **67**, 180101-1-180101-4 (2003).

247. **03MO383:** MOUSSA S.M., IBBERSON R.M., BIERINGER M., FITCH A.N., ROSSEINSKY M.J., "In situ measurement of cation order and domain growth in an electroceramic", *Chemistry of Materials* **15**, 2527-2533 (2003).
248. **03RU384:** RUBEN M., LEHN J.M., VAUGHAN G., "Synthesis of ionisable [2 × 2] grid-type metallo-arrays and reversible protonic modulation of the optical properties of the  $[\text{Co}_4^{\text{II}} \text{L}_4]^{8+}$  species", *Chemical Communications* , 1338-1339 (2003).
249. **03ME385:** MERMET A., DAVID L., LORENZEN M., KRISCH M., "Inelastic X-ray scattering from stretch-oriented polyethylene", *Journal of Chemical Physics* **119**, 1879-1884 (2003).
250. **03SL386:** SLADECEK M., KAISERMAYR M., SEPIOL B., STADLER L., VOGL G., PAPPAS C., GRÜBEL G., RÜFFER R., "Diffusion studies in ordered alloys", , ().
251. In : "Material Research in Atomic Scale by Mössbauer Spectroscopy " MASHLAN M., ET AL. (Ed.) (Kluwer Academic Publishers, 2003) pp. 229-237.
252. **03LI387:** LINDBAUM A., HEATHMAN S., LE BIHAN T., HAIRE R.G., IDIRI M., LANDER G.H., "High-pressure crystal structures of actinide elements to 100 GPa", *Journal of Physics Condensed Matter* **15**, S2297-S2303 (2003).
253. **03CA388:** CACIUFFO R., PAIXAO J.A., DETLEFS C., LONGFIELD M.J., SANTINI P., BERNHOEFT N., REBIZANT J., LANDER G.H., "Multipolar ordering in  $\text{NpO}_2$  below 25 K", *Journal of Physics Condensed Matter* **15**, S2287-S2296 (2003).
254. **03GR389:** GRZECHNIK A., CRICHTON W.A., GESLAND J.Y., "Potassium tryttrium decafluoride,  $\text{KY}_3\text{F}_{10}$ , synthesized at high pressures and high temperatures", *Solid State Sciences* **5**, 757-764 (2003).
255. **03MO390:** MORELHAO S.L., QUIVY A.A., HÄRTWIG J., "Hybrid and effective satellites for studying superlattices", *Microelectronics Journal* **34**, 695-699 (2003).
256. **03UR391:** URIARTE J.L., YAVARI A.R., NISHIYAMA N., HEUNEN G., VAUGHAN G., KVICK Å., INOUE A., "In-the-beam metallic glass formation monitored by high-energy synchrotron radiation", *Scripta Materialia* **48**, 809-812 (2003).
257. **03DI392:** DI MATTEO S., CHATTERJI T., JOLY Y., STUNAUULT A., PAIXAO J.A., SURYANARAYANAN R., DHALENNE G., REVCOLEVSCHI A., "Resonant X-ray scattering from  $\text{LaSr}_2\text{Mn}_2\text{O}_7$  at the Mn K edge", *Physical Review B* **68**, 024414-1-024414-6 (2003).
258. **03CH393:** CHATTERJI T., FAUTH F., OULADDIAF B., MANDAL P., GHOSH B., "Volume collapse in  $\text{LaMnO}_3$  caused by an orbital order-disorder transition", *Physical Review B* **68**, 052406-1-052406-4 (2003).
259. **03BE394:** BERTRAND L., DOUCET J., SIMIONOVICI A., TSOUCARIS G., WALTER P., "Lead-revealed lipid organization in human hair", *Biochimica et Biophysica Acta* **1620**, 218-224 (2003).
260. **03BL395:** BLACHOT J.F., DIAT O., PUTAUX J.L., ROLLET A.L., RUBATAT L., VALLOIS C., MÜLLER M., GEBEL G., "Anisotropy of structure and transport properties in sulfonated polyimide membranes", *Journal of Membrane Science* **214**, 31-42 (2003).
261. **03MA396:** MANFREDOTTI C., VITTONI E., PAOLINI C., OLIVERO P., LO GIUDICE A., JAKSIC M., BARRETT R., "Investigation of 4H-SiC Schottky diodes by ion and X-ray micro beam induced charge collection techniques", *Diamond and Related Materials* **12**, 667-671 (2003).
262. **03XI397:** XIAN X., PETUKHOV A.V., SNEL M.M.E., DOLBANYA I.P., AARTS D.G.A.L., VROEGE G.J., LEKKERKERKER H.N.W., "Depletion-induced colloidal crystals at a wall characterised by small-angle X-ray diffraction", *Journal of Applied Crystallography* **36**, 597-601 (2003).
263. **03CL426:** CLOETENS P., LUDWIG W., BOLLER E., HELFEN L., SALVO L., MACHE R., SCHLENKER M., "Quantitative phase contrast tomography using coherent synchrotron radiation", *Proceedings SPIE* **4503**, 82-91 (2002).

264. **03BE428:** BERAR J.F., BLANQUART L., BOUDET N., BREUGNON P., CAILLOT B., CLEMENS J.C., DELPIERRE P., KOUDOBINE I., MOUGET C., POTHEAU R., VALIN I., "A pixel detector with large dynamic range for high photon counting rates", *Journal of Applied Crystallography* **35**, 471-476 (2002).
265. **03EI429:** EICHHORN S.J., YOUNG R.J., DAVIES R.J., RIEKEL C., "Characterisation of the microstructure and deformation of high modulus cellulose fibres", *Polymer* **44**, 5901-5908 (2003).
266. **03MA430:** MAHENDRASINGAM A., BLUNDELL D.J., WRIGHT A.K., URBAN V., NARAYANAN T., FULLER W., "Observations of structure development during crystallisation of oriented poly(ethylene terephthalate)", *Polymer* **44**, 5915-5925 (2003).
267. **03PR431:** PREVOT G., STEADMAN P., FERRER S., "Determination of the elastic dipole at the atomic steps of Pt(977) from surface X-ray diffraction", *Physical Review B* **67**, 245409-1-245409-6 (2003).
268. **03MA432:** MACMAHON P.J., PEELE A.G., PATERSON D., NUGENT K.A., SNIGIREV A., WEITKAMP T., RAU C., "X-ray tomographic imaging of the complex refractive index", *Applied Physics Letters* **83**, 1480-1482 (2003).
269. **03PI433:** PISANI M., NARAYANAN T., DI GREGORIO G.M., FERRERO C., FINET S., MARIANI P., "Compressing inverse lyotropic systems: Structural behavior and energetics of dioleoyl phosphatidyl ethanolamine", *Physical Review E* **68**, 021924-1-021924-11 (2003).
270. **03HU434:** HUTTEL Y., VAN DER LAAN G., TEODORESCU C.M., BENCOK P., DHESI S.S., "Magnetic V embedded in copper evidenced by X-ray magnetic circular dichroism", *Physical Review B* **67**, 052408-1-052408-4 (2003).
271. **03BR435:** BRAVIN A., FIEDLER S., COAN P., LABICHE J.C., PONCHUT C., PETERZOL A., THOMLINSON W., "Comparison between a position sensitive germanium detector and a taper optics CCD "FRELON" camera for diffraction enhanced imaging", *Nuclear Instruments and Methods in Physics Research A* **510**, 35-40 (2003).
272. **03BO436:** BOUDET N., BERAR J.F., BLANQUART L., BREUGON P., CAILLOT B., CLEMENS J.C., KOUDOBINE I., DELPIERRE P., MOUGET C., POTHEAU R., VALIN I., "XPAD: A hybrid pixel detector for X-ray diffraction and diffusion", *Nuclear Instruments and Methods in Physics Research A* **510**, 41-44 (2003).
273. **03BI437:** BIRKEDAL H., VAN BEEK W., EMERICH H., PATTISON P., "Thermal expansion and phase purity of commercial MgB<sub>2</sub>", *Journal of Materials Science Letters* **22**, 1069-1071 (2003).
274. **03WO438:** WONG J., KRISCH M., FARBER D.L., OCCELLI F., SCHWARTZ A.J., CHIANG T.C., WALL M., BORO C., XU R., "Phonon dispersion of fcc  $\alpha$ -plutonium-gallium by inelastic X-ray scattering", *Science* **301**, 1078-1080 (2003).
275. **03PA439:** PANIZZA P., COURBIN L., CRISTOBAL G., ROUCH J., NARAYANAN T., "Formation of structural steady states in lamellar/sponge phase-separating fluids under shear flow", *Physica A* **322**, 38-54 (2003).
276. **03SC440:** SCHMIDT S., POULSEN H.F., VAUGHAN G.B.M., "Structural refinements of the individual grains within polycrystals and powders", *Journal of Applied Crystallography* **36**, 326-332 (2003).
277. **03LE445:** LE BIHAN T., IDIRI M., HEATHMAN S., "New investigation of pressure-induced rhombohedral distortion of uranium nitride", *Journal of Alloys and Compounds* **358**, 120-125 (2003).
278. **03TE446:** TEIXEIRA A.V., MORFIN I., EHRBURGER-DOLLE F., ROCHAS C., PANINE P., LICINIO P., GEISSLER E., "Structure and magnetic properties of dilute ferrofluids suspended in gels", *Composites Sciences and Technology* **63**, 1105-1111 (2003).
279. **03BE447:** BERTRAND L., DOUCET J., DUMAS P., SIMIONOVICI A., TSOUCARIS G., WALTER P., "Microbeam synchrotron imaging of hairs from Ancient Egyptian mummies", *Journal of Synchrotron Radiation* **10**, 387-392 (2003).

280. **03MA449:** MARANGOLO M., OHRESSER P., BROOKS N.B., CHERIFI S., BOEGLIN C., EDDRIEF M., ETGENS V.H., "Tails of near-edges X-ray absorption spectra as a fingerprint of magnetic and structural phase transitions. Application to metallic *3d* ultra thin films", *Journal of Applied Physics* **93**, 5151-5155 (2003).
281. **03HE450:** HELLAND R., CZAPINSKA H., LEIROS I., OLUFSEN M., OTLEWSKI J., SMALÅS A.O., "Structural consequences of accommodation of four non-cognate amino acid residues in the S1 pocket of bovine trypsin and chymotrypsin", *Journal of Molecular Biology* **333**, 845-861 (2003).
282. **03PA451:** PALOSZ B., GRZANKA E., GIERLOTKA S., STEL'MAKH S., PIELASZEK R., BISMAYER U., NEUEFEIND J., WEBER H.P., PALOSZ W., "Diffraction studies of nanocrystals: Theory and experiment", *Acta Physica Polonica A* **102**, 57-82 (2002).
283. **03SE452:** SERGUEEV I., FRANZ H., ASTHALTER T., PETRY W., VAN BÜRCK U., SMIRNOV G.V., "Structural relaxation in a viscous liquid studied by quasielastic nuclear forward scattering", *Physical Review B* **66**, 184210-1-184210-7 (2002).
284. **03LE455:** LEUPOLD O., "Hyperfine spectroscopy with nuclear resonant scattering of synchrotron radiation", *Hyperfine Interactions* **144-145**, 21-32 (2002).
285. **03AS456:** ASTHALTER T., BAUER M., VAN BÜRCK U., SERGUEEV I., FRANZ H., CHUMAKOV A.I., "Phonons in confinement and the boson peak using nuclear inelastic absorption", *Hyperfine Interactions* **144/145**, 77-83 (2002).
286. **03OS457:** MADSEN A.Ø, MASON S.A., LARSEN S., "A neutron diffraction study of xylitol: Derivation of mean square internal vibrations for H atoms from a rigid-body description", *Acta Crystallographica B* **59**, 653-663 (2003).
287. **03GU458:** GUILLOU N., LIVAGE C., VAN BEEK W., NOGUES M., FERREY G., "A layered nickel succinate with unprecedented hexanickel units: Structure elucidation from powder-diffraction data, and magnetic and sorption properties", *Angewandte Chemie International Edition English* **42**, 643-647 (2003).
288. **03PL459:** PLECH A., RANDLER R., WULFF M., MIRLOUP F., VUILLEUMIER R., "Determination of structure in liquid solutions - implications for picosecond photoexcitation studies", *Journal of Physics Condensed Matter* **15**, S137-S143 (2003).
289. **03DA460:** DAUPHIN Y., CUIF J.P., DOUCET J., SALOME M., SUSINI J., WILLIAMS C.T., "In situ chemical speciation of sulfur in calcitic biominerals and the simple prism concept", *Journal of Structural Biology* **142**, 272-280 (2003).
290. **03FR461:** FRANCESCANGELI O., FERRERO C., PUCCI D., GHEDINI M., "EXAFS study of the liquid-crystalline phase of the cyclopalladated 4-4'-bis(hexyloxy)azoxybenzene acetylacetonate complex", *Molecular Crystals and Liquid Crystals* **378**, 77-88 (2002).
291. **03LE463:** LEVY D., PAVESE A., HANFLAND M., "Synthetic MgAl<sub>2</sub>O<sub>4</sub> (spinel) at high-pressure conditions (0.0001-30 GPa): A synchrotron X-ray powder diffraction study", *American Mineralogist* **88**, 93-98 (2003).
292. **03DE464:** DE BACKER M., MCSWEENEY S., RASMUSSEN H.B., RIISE B.W., LINDLEY P., HOUGH E., "The 1.9 Å crystal structure of heat-labile shrimp alkaline phosphatase", *Journal of Molecular Biology* **318**, 1265-1274 (2002).
293. **03PA466:** PARK J.H., YOO C.S., IOTA V., CYNN H., NICOL M.F., LE BIHAN T., "Crystal structure of bent carbon dioxide phase IV", *Physical Review B* **68**, 014107-1-014107-9 (2003).
294. **03RO467:** ROZENBERG G.K., PASTERNAK M.P., XU W.M., DUBROVINSKY L.S., OSORIO GUILLEN J.M., AHUJA R., JOHANSSON B., LE BIHAN T., "Pressure-induced structural transformations in the Mott insulator FeI<sub>2</sub>", *Physical Review B* **68**, 064105-1-064105-9 (2003).
295. **03KR468:** KREISEL J., BOUVIER P., DKHIL B., THOMAS P.A., GLAZER A.M., WELBERRY T.R., CHAABANE B., MEZOUAR M., "High-pressure X-ray scattering of oxides with a nanoscale local structure: Application to Na<sub>1/2</sub>Bi<sub>1/2</sub>TiO<sub>3</sub>", *Physical Review B* **68**, 014113-1-014113-7 (2003).

296. **03DU469:** DUBROVINSKY L.S., DUBROVINSKAIA N.A., SEIFERT F., LANGENHORST F., DMITRIEV V., WEBER H.P., LE BIHAN T., "High-pressure and high-temperature polymorphism in silica", *High Pressure Research* **23**, 35-39 (2003).
297. **03FO470:** FOURME R., GIRARD E., KAHN R., ASCONE I., MEZOUAR M., DHAUSSY A.C., LIN T., JOHNSON J.E., "Using a quasi-parallel X-ray beam of ultrashort wavelength for high-pressure virus crystallography: Implications for standard macromolecular crystallography", *Acta Crystallographica D* **59**, 1767-1772 (2003).
298. **03YO471:** YOO C.S., IOTA V., CYNH H., NICOL M., PARK J.H., LE BIHAN T., MEZOUAR M., "Disproportionation and other transformations of N<sub>2</sub>O at high pressures and temperatures to lower energy, denser phases", *Journal of Physical Chemistry B* **107**, 5922-5925 (2003).
299. **03LE475:** LEUPOLD O., RUPPRECHT K., WORTMANN G., "Electronic and magnetic transitions in europium compounds studied by nuclear forward scattering of synchrotron radiation", *Structural Chemistry* **14**, 97-107 (2003).
300. **03ME476:** MERINO J.M., DI MICHIEL M., LEON M., "Structural analysis of CuInSe<sub>2</sub> and CuIn<sub>3</sub>Se<sub>5</sub> at different temperatures with synchrotron radiation", *Journal of Physics and Chemistry of Solids* **64**, 1649-1652 (2003).
301. **03AR477:** ARVANITIDIS J., PAPAGELIS K., MARGADONNA S., PRASSIDES K., FITCH A.N., "Temperature-induced valence transition and associated lattice collapse in samarium fulleride ", *Nature* **425**, 599-602 (2003).
302. **03MO478:** MONACO G., FALCONI S., CRICHTON W.A., MEZOUAR M., "Nature of the first-order phase transition in fluid phosphorus at high temperature and pressure", *Physical Review Letters* **90**, 255701-1-255701-4 (2003).
303. **03FU479:** FUDGE D.S., GARDNER K.H., FORSYTH V.T., RIEKEL C., GOSLINE J.M., "The mechanical properties of hydrated intermediate filaments: Insights from hagfish slime threads", *Biophysical Journal* **85**, 2015-2027 (2003).
304. **03FI480:** FINETTI P., BORGATTI F., FELICI R., GUNNELLA R., D'ADDATO S., "Structure properties of nanostructured Fe films grown on *c*(2 × 2) N/Cu(1 0 0) self-organised surface", *Applied Surface Science* **212-213**, 85-91 (2003).
305. **03DE481:** DE JAGER M.W., GOORIS G.S., DOLBANYA I.P., BRAS W., PONEC M., BOUWSTRA J.A., "The phase behaviour of skin lipid mixtures based on synthetic ceramides", *Chemistry and Physics of Lipids* **124**, 123-124 (2003).
306. **03FA482:** FARINA L., BRILLANTE A., DELLA VALLE R.G., VENUTI E., AMBOAGE M., SYASSEN K., "Pressure-induced phase transition in pentacene", *Chemical Physics Letters* **375**, 490-494 (2003).
307. **03BO489:** BORASTON A.B., REVETT T.J., BORASTON C.M., NURIZZO D., DAVIES G.J., "Structural and thermodynamic dissection of specific mannan recognition by a carbohydrate binding module, *TmCBM27*", *Structure* **11**, 665-675 (2003).
308. **03DI490:** DI FABRIZIO E., CABRINI S., COJOC D., ROMANATO F., BUSINARO L., ALTISSIMO M., KAULICH B., WILHEIN T., SUSINI J., DE VITTORIO M., VITALE E., GIGLI G., CINGOLANI R., "Shaping X-rays by diffractive coded nano-optics", *Microelectronic Engineering* **67-68**, 87-95 (2003).
309. **03NO491:** NÖHAMMER B., DAVID C., ROTHUIZEN H., HOSZOWSKA J., SIMIONOVICI A., "Deep reactive ion etching of silicon and diamond for the fabrication of planar refractive hard X-ray lenses", *Microelectronic Engineering* **67-68**, 453-460 (2003).
310. **03PO492:** POULSEN H.F., LAURIDSEN E.M., SCHMIDT S., MARGULIES L., DRIVER J.H., "3D-characterisation of microstructure evolution during annealing of a deformed aluminum single crystal", *Acta Materialia* **51**, 2517-2529 (2003).
311. **03CA493:** CATTARUZZA E., BATTAGLIN G., CALVELLI P., GONELLA F., MATTEI G., MAURIZIO C., MAZZOLDI P., PADOVANI S., POLLONI R., SADA C., SCREMIN B.F.,

- D'ACAPITO F., "Fast nonlinear refractive index of pure and alloy metallic nanoclusters in silica glass", *Composites Sciences and Technology* **63**, 1203-1208 (2003).
312. **03DE494**: DELLISANTI C.D., SPINELLI S., CABBILLAU C., FINDLAY J.B.C., ZAGALSKY P.F., FINET S., RECEVEUR-BRECHOT V., "Quaternary structure of alpha-crustacyanin from lobster as seen by small-angle X-ray scattering", *FEBS Letters* **544**, 189-193 (2003).
313. **03SM495**: SMILGIES D.M., BOUDET N., YANAGI H., "In-plane alignment of *para*-sexiphenyl films grown on KCl(0 0 1)", *Applied Surface Science* **189**, 24-30 (2002).
314. **03RE496**: RESSLER T., WIENOLD J., JENTOFT R.E., NEISIUS T., "Bulk structural investigation of the reduction of MoO<sub>3</sub> with propene and the oxidation of MoO<sub>2</sub> with oxygen", *Journal of Catalysis* **210**, 67-83 (2002).
315. **03PO504**: POULSEN H.F., MARGULIES L., SCHMIDT S., WINTHER G., "Lattice rotations of individual bulk grains: Part I: 3D X-ray characterization", *Acta Materialia* **51**, 3821-3830 (2003).
316. **03CR505**: CRAIG C.L., RIEKEL C., "Corrigendum to "Comparative architecture of silks, fibrous proteins and their encoding genes in insects and spiders": [Comp. Biochem. Physiol. B 133 (2002) 493-507]", *Comparative Biochemistry and Physiology B* **135**, 721-722 (2003).
317. **03BR506**: BRUMMER A., HONKIMÄKI V., BERWIAN P., PROBST V., PALM J., HOCK R., "Formation of CuInSe<sub>2</sub> by the annealing of stacked elemental layers—analysis by in situ high-energy powder diffraction", *Thin Solid Films* **437**, 297-307 (2003).
318. **03GE507**: GEORGES S., GOUTENOIRE F., ALTORFER F., SHEPTYAKOV D.V., FAUTH F., SUARD E., LACORRE P., "Thermal, structural and transport properties of the fast oxide-ion conductors La<sub>2-x</sub>R<sub>x</sub>Mo<sub>2</sub>O<sub>9</sub> (R=Nd, Gd, Y)", *Solid State Ionics* **161**, 231-241 (2003).
319. **03OR508**: ORTEGA R., DEVES G., FAYARD B., SALOME M., SUSINI J., "Combination of synchrotron radiation X-ray microprobe and nuclear microprobe for chromium and chromium oxidation states quantitative mapping in single cells", *Nuclear Instruments and Methods in Physics Research B* **210**, 325-329 (2003).
320. **03VI509**: VITTONI E., LO GIUDICE A., PAOLINI C., OLIVERO P., MANFREDOTTI C., BARRETT R., RIGATO V., "Ion and X-ray micro-beam induced charge collection and their applications in CVD diamond detector characterisation", *Nuclear Instruments and Methods in Physics Research B* **210**, 159-163 (2003).
321. **03PO510**: PONCHUT C., ZONTONE F., "Evaluation of medipix-1 in X-ray scattering and X-ray diffraction applications", *Nuclear Instruments and Methods in Physics Research A* **510**, 29-34 (2003).
322. **03PE511**: PETERZOL A., BRAVIN A., COAN P., ELLEAUME H., "Image quality evaluation of the angiography imaging system at the European Synchrotron Radiation Facility", *Nuclear Instruments and Methods in Physics Research A* **510**, 45-50 (2003).
323. **03CA513**: CASTELLOTE M., ANDRADE C., ALONSO C., TURRILLAS X., KVICK Å., TERRY A., VAUGHAN G., CAMPO J., "Synchrotron radiation diffraction study of the microstructure changes in cement paste due to accelerated leaching by application of electrical fields", *Journal of the American Ceramic Society* **85**, 631-635 (2002).
324. **03RE520**: RENEVIER H., PROIETTI M.G., GRENIER S., CIATTO G., GONZALEZ L., GARCIA J.M., GERARD J.M., GARCIA J., "Glancing angle EXAFS of encapsulated self-assembled InAs/InP quantum wires and InAs/GaAs quantum dots", *Materials Science and Engineering B* **101**, 174-180 (2003).
325. **03BR521**: BREIBY D.W., SAMUELSEN E.J., KONOVALOV O., "The drying behaviour of conjugated polymer solutions", *Synthetic Metals* **139**, 361-369 (2003).
326. **03WA522**: WANG C.H., WALSH M., BALASUBRAMANIAN M.K., DOKLAND T., "Expression, purification, crystallization and preliminary crystallographic analysis of the calponin-homology domain of Rng2", *Acta Crystallographica D* **59**, 1809-1812 (2003).
327. **03HO523**: HOOPER D., BARNES P., COCKCROFT J.K., JUPE A.C., JACQUES S.D.M., BAILEY S.P., LUPO F., VICKERS M., HANFLAND M., "An *in situ* study of crystallisation gradients during

- the hydrothermal/autoclave synthesis of zeolites", *Physical Chemistry - Chemical Physics* **5**, 4946-4950 (2003).
328. **03WA524:** WARREN S., LEE T.L., ZEGENHAGEN J., REITZLE A., KOLB D.M., ZIEGLER J., MAROUN F., ALLONGUE P., KAZIMIROV A., SCHERB G., "X-ray structural analysis of semiconductor-electrolyte interfaces
329. In : "Physics at Surfaces and Interfaces " DEV B.N. (Ed.) (World Scientific, 2003) pp. 22-38.
330. **03SM525:** SMILGIES D.M., "High-resolution grazing-incidence scattering using a combination of analyzer crystal and linear detector", *Review of Scientific Instruments* **74**, 4041-4047 (2003).
331. **03AR526:** ARLETTI R., FERRO O., QUARTIERI S., SANI A., TABACCHI G., VEZZALINI G., "Structural deformation mechanisms of zeolites under pressure", *American Mineralogist* **88**, 1416-1422 (2003).
332. **03BO527:** BOLDYREVA E.V., AHSBAHS H., WEBER H.P., "A comparative study of pressure-induced lattice strain of  $\alpha$ - and  $\beta$ -polymorphs of glycine", *Zeitschrift fuer Kristallographie* **218**, 1-6 (2003).
333. **03PA529:** PALOSZ B., GRZANKA E., GIERLOTKA S., STEL'MAKH S., PIELASZEK R., LOJKOWSKI W., BISMAYER U., NEUEFEIND J., WEBER H.P., PALOSZ W., "Application of X-ray powder diffraction to nano-materials-determination of the atomic structure of nanocrystals with relaxed and strained surfaces", *Phase Transitions* **76**, 171-185 (2003).
334. **03SC530:** SCHÖNLEBER A., PATTISON P., CHAPUIS G., "The (3+1)-dimensional superspace description of the commensurately modulated structure of *p*-chlorobenzamide ( $\alpha$ -form) and its relation to the  $\beta$ -form", *Zeitschrift für Kristallographie* **218**, 507-513 (2003).
335. **03TH531:** THIBAUT X., BLOCH J.F., BOLLER E., "Felt structure characterised by synchrotron microtomography", *Applied Journal* **55**, 145-148 (2002).
336. **03SC532:** SCHOTTE F., TECHERT S., ANIFINRUD P., SRAJER V., MOFFAT K., WULFF M., "Picosecond structural studies using pulsed synchrotron radiation", , ().
337. In : "Third-Generation Hard X-Ray Synchrotron Radiation Sources: Source Properties, Optics, and Experimental Techniques " MILLS D.M. (Ed.) (John Wiley & Sons, Inc, 2002) pp. 345-374.
338. **03AQ533:** AQUILANTI G., CRICHTON W.A., PASCARELLI S., "Combined energy dispersive XAS and angle dispersive XRD for high pressure studies at ID24, ESRF", *High Pressure Research* **23**, 301-305 (2003).
339. **03GA534:** GARCIA-MUNOZ J.L., AMBOAGE M., HANFLAND M., ALONSO J.A., MARTINEZ-LOPE M.J., MORTIMER R., "Pressure-induced melting of charge-order in the self-doped mott insulator yttrium nickelate", *High Pressure Research* **23**, 171-175 (2003).
340. **03BE535:** BELLONI L., DELSANTI M., FONTAINE P., MULLER F., GUENOUN P., MAYS J.W., BOESECKE P., ALBA M., "Counterion distribution in urchinlike charged copolymer micelles Monte Carlo simulation and small angle X-ray scattering", *Journal of Chemical Physics* **119**, 7560-7567 (2003).
341. **03ME546:** MEGDICHE M., GERGAUD P., CURTIL C., THOMAS O., CHENEVIER B., MAZUELAS A., "In-situ study of stress evolution during solid state reaction of Pd with Si(001) using synchrotron radiation", *Microelectronic Engineering* **70**, 436-441 (2003).
342. **03MA547:** MARTIN-BADOSA E., ELMOUTAOUAKKIL A., NUZZO S., AMBLARD D., VICO L., PEYRIN F., "A method for the automatic characterization of bone architecture in 3D mice microtomographic images", *Computerized Medical Imaging and Graphics* **27**, 447-458 (2003).
343. **03WE548:** WEISS P., OBADIA L., MAGNE D., BOURGES X., RAU C., WEITKAMP T., KHAIROUN I., BOULER J.M., CHAPPARD D., GAUTHIER O., DACULSI G., "Synchrotron X-ray microtomography (on a micron scale) provides three-dimensional imaging representation of bone ingrowth in calcium phosphate biomaterials", *Biomaterials* **24**, 4591-4601 (2003).

344. **03BO549:** BOTTI A., PYCKHOUT-HINTZEN W., RICHTER D., URBAN V., STRAUBE E., KOHLBRECHER J., "Silica filled elastomers: Polymer chain and filler characterization in the undeformed state by a SANS-SAXS approach", *Polymer* **44**, 7505-7512 (2003).
345. **03ZH550:** ZHELUDEVA S.I., NOVIKOVA N.N., KONOVALOV O.V., KOVALCHUK M.V., STEPINA N.D., TERESCHENKO E.Y., "Langmuir monolayers on water surface investigated by X-ray total reflection fluorescence", *Materials Science and Engineering C* **23**, 567-570 (2003).
346. **03HE551:** HENGESBERGER S., ENSTROEM J., PEYRIN F., ZYSSET P., "How is the indentation modulus of bone tissue related to its macroscopic elastic response? A validation study", *Journal of biomechanics* **36**, 1503-1509 (2003).
347. **03MA552:** MAIRE E., FAZEKAS A., SALVO L., DENDIEVEL R., YOUSSEF S., CLOETENS P., LETANG J.M., "X-ray tomography applied to the characterization of cellular materials. Related finite element modeling problems", *Composites Sciences and Technology* **63**, 2431-2443 (2003).
348. **03DU553:** DUBOIS L., CASPAR R., JACQUAMET L., PETIT P.E., CHARLOT M.F., BAFFERT C., COLLOMB M.N., DERONZIER A., LATOUR J.M., "Binuclear manganese compounds of potential biological significance. Part 2. Mechanistic study of hydrogen peroxide disproportionation by dimanganese complexes: The two oxygen atoms of the peroxide end up in a dioxo intermediate", *Inorganic Chemistry* **42**, 4817-4827 (2003).
349. **03WA554:** WALTHER D., LIESICKE S., BÖTTCHER L., FISCHER R., GÖRIS H., VAUGHAN G., "Metal complexes with 2,3-Bis(diphenylphosphino)-1,4-diazadiene ligands: Synthesis, structures, and an intramolecular metal-mediated [4 + 2] cycloaddition employing a benzene ring as a dienophile", *Inorganic Chemistry* **42**, 625-632 (2003).
350. **03PI555:** PIQUER C., GRANDJEAN F., MATHON O., PASCARELLI S., REGER D.L., LITTLE C.A., LONG G.J., "High-pressure iron K-edge X-ray absorption spectral study of the spin-state crossover in  $\{\text{Fe}[\text{HC}(3,5\text{-}(\text{CH}_3)_2\text{pz})_3]_2\}_2$  and  $\{\text{Fe}[\text{HC}(3,5\text{-}(\text{CH}_3)_2\text{pz})_3]\}(\text{BF}_4)_2$ ", *Inorganic Chemistry* **42**, 982-985 (2003).
351. **03RO556:** ROSE J., BENARD A., SUSINI J., BORSCHNECK D., HAZEMANN J.L., CHEYLAN P., VICHOT A., BOTTERO J.Y., "First insights of Cr speciation in leached portland cement using X-ray spectromicroscopy", *Environmental Science and Technology* **37**, 4864-4870 (2003).
352. **03PE557:** PETKOV N., MINTOVA S., JEAN B., METZGER T.H., BEIN T., "Stable mesostructured silicate films containing nanosized zeolite", *Chemistry of Materials* **15**, 2240-2246 (2003).
353. **03JO558:** JONGEN L., GODERIS B., DOLBNYA I., BINNEMANS K., "Influence of the chain length on the thermal behavior of lanthanide(III) 4-alkoxybenzoates", *Chemistry of Materials* **15**, 212-217 (2003).
354. **03AL559:** ALONSO C., GURNEY R.W., ELIASH R., HONG S.C., SHEN Y.R., JENSEN T.R., KJAER K., KONOVALOV O., LAHAV M., LEISEROWITZ L., "A crystalline langmuir monolayer designed as a template for selective intercalation of water soluble  $\alpha$ -amino acids", *Crystal Growth & Design* **3**, 683-690 (2003).
355. **03RO560:** ROESSLE M., FLOT D., ENGEL J., BURGHAMMER M., RIEKEL C., CHANZY H., "Fast intracrystalline hydration of  $\alpha$ -chitin revealed by combined microdrop generation and on-line synchrotron radiation microdiffraction", *Biomacromolecules* **4**, 981-986 (2003).
356. **03RE562:** REICHERT H., KLEIN O., BUGAEV V., SHCHYGLO O., UDYANSKY A., DOSCH H., PETERS K.F., "Absence of  $2k_F$  splitting in the diffuse scattering from  $\text{Cu}_3\text{Au}$  at the (001) surface", *Physical Review Letters* **90**, 185504-1-185504-4 (2003).
357. **03BO563:** BÖKER A., ELBS H., HÄNSEL H., KNOLL A., LUDWIGS S., ZETTL H., ZVELINDOVSKY A.V., SEVINK G.J.A., URBAN V., ABETZ V., MÜLLER A.H.E., KRAUSCH G., "Electric field induced alignment of concentrated block copolymer solutions", *Macromolecules* **36**, 8078-8087 (2003).
358. **03FI564:** FILIPPONI A., DE PANFILIS S., OLIVA C., RICCI M.A., D'ANGELO P., BOWRON D.T., "Ion hydration under pressure", *Physical Review Letters* **91**, 165505-1-165505-4 (2003).

359. **03ZO565:** ZOLOTUKHIN M.G., COLQUHOUN H.M., SESTIAA L.G., RUEDA D.R., FLOT D., "One-pot synthesis and characterization of soluble poly(aryl ether-ketone)s having pendant carboxyl groups", *Macromolecules* **36**, 4766-4771 (2003).
360. **03JE566:** JEREZ A., LAVAGNA M., BENSIMON D., "Strong-coupling fixed point instability in a single-channel  $SU(N)$  Kondo model", *Physical Review B* **68**, 094410-1-094410-24 (2003).
361. **03BO567:** BORAGNO C., BUATIER F., COSTANTINI G., MOLLE A., DE SANCTIS D., VALBUSA U., BORGATTI F., FELICI R., FERRER S., "Time evolution of the local slope during Cu(110) ion sputtering", *Physical Review B* **68**, 094102-1-094102-5 (2003).
362. **03SI568:** SIKHARULIDZE I., FARAGO B., DOLBANYA I.P., MADSEN A., DE JEU W.H., "Surface and bulk elasticity determined fluctuation regimes in smectic membranes", *Physical Review Letters* **91**, 165504-1-165504-4 (2003).
363. **03CO569:** COLLINS S.P., LAUNDY D., DMITRIENKO V.E., MANNIX D., THOMPSON P., "Temperature-dependent forbidden resonant X-ray scattering in zinc oxide", *Physical Review B* **68**, 064110-1-064110-4 (2003).
364. **03SC570:** SCHÜLLI T.U., STANGL J., ZHONG Z., LECHNER R.T., SZTUCKI M., METZGER T.H., BAUER G., "Direct determination of strain and composition profiles in SiGe islands by anomalous X-ray diffraction at high momentum transfer", *Physical Review Letters* **90**, 066105-1-066105-4 (2003).
365. **03PO571:** POPESCU R., MEYERHEIM H.L., SANDER D., KIRSCHNER J., STEADMAN P., ROBACH O., FERRER S., "Surface X-ray structure analysis of periodic misfit dislocations in Fe/W(110)", *Physical Review B* **68**, 155421-1-155421-11 (2003).
366. **03KR572:** KRUEGER P., KOTANI A., "Calculation of core-level photoemission spectra of Mn films on Ag(001)", *Physical Review B* **68**, 035407-1-035407-7 (2003).
367. **03TA573:** TAGUCHI M., VAN DER LAAN G., ARENHOLZ E., DHESI S.S., DUDZIK E., "Magnetic circular dichroism and spin polarization in  $3d$   $4f$  resonant photoemission from Tb metal in the perpendicular geometry", *Physical Review B* **68**, 104408-1-104408-9 (2003).
368. **03MO574:** MORA S., DAILLANT J., MECKE K., LUZET D., BRASLAU A., ALBA M., STRUTH B., "X-ray synchrotron study of liquid-vapor interfaces at short length scales: Effect of long-range forces and bending energies", *Physical Review Letters* **90**, 216101-1-216101-4 (2003).
369. **03PE575:** PETUKHOV A.V., DOLBANYA I.P., AARTS D.G.A.L., VROEGE G.J., LEKKERKERKER H.N.W., "Bragg rods and multiple X-ray scattering in random-stacking colloidal crystals", *Physical Review Letters* **90**, 028304-1-028304-4 (2003).
370. **03RO576:** RÖHLSBERGER R., BANSMANN J., SENZ V., JONAS K.L., BETTAC A., MEIWES-BROER K.H., "Nanoscale magnetism probed by nuclear resonant scattering of synchrotron radiation", *Physical Review B* **67**, 245412-1-245412-16 (2003).
371. **03BO577:** BOMBARDI A., D'ACAPITO F., MATTENBERGER K., VOGT O., LANDER G.H., "Non-Vegard behavior of the  $U_xLa_{1-x}S$  system", *Physical Review B* **68**, 104414-1-104414-7 (2003).
372. **03MU578:** MÜNZENBERG M., LEUENBERGER F., FELSCH W., KRILL G., NEISIUS T., PASCARELLI S., PIZZINI S., "Magnetic polarization of the La and Ce  $5d$  states near the interfaces of Fe/LaH<sub>x</sub> and Fe/CeH<sub>x</sub> multilayers across the metal-insulator transition in the hydrides: An X-ray magnetic circular dichroism study", *Physical Review B* **67**, 224431-1-224431-19 (2003).
373. **03RE579:** REEDIJK M.F., ARSIC J., KAMINSKI D., POODT P., KNOPS H., SERRANO P., CASTRO G.R., Vlieg E., "Melting behavior of the  $\alpha$ -Pb/Ge(111) structure", *Physical Review B* **67**, 165423-1-165423-5 (2003).
374. **03DH580:** DHESI S.S., DUERR H.A., MÜNZENBERG M., FELSCH W., "Isolating the interface magnetocrystalline anisotropy contributions in magnetic multilayers", *Physical Review Letters* **90**, 117204-1-117204-4 (2003).

375. **03WI581:** WIEDENMANN A., HOELL A., KAMMEL M., BOESECKE P., "Field-induced pseudocrystalline ordering in concentrated ferrofluids", *Physical Review E* **68**, 031203-1-031203-10 (2003).
376. **03TH582:** THURN-ALBRECHT T., ZONTONE F., GRÜBEL G., STEFFEN W., MÜLLER-BUSCHBAUM P., PATKOWSKI A., "Photon correlation spectroscopy with high-energy coherent X rays", *Physical Review E* **68**, 031407-1-031407-5 (2003).
377. **03RI583:** RICHARD P., PHILIPPE P., BARBE F., BOURLES S., THIBAUT X., BIDEAU D., "Analysis by X-ray microtomography of a granular packing undergoing compaction", *Physical Review E* **68**, 020301-1-020301-4 (2003).
378. **03JE584:** DE JEU W.H., FERA A., KONOVALOV O., OSTROVSKII B.I., "Two-Stage surface freezing of a single top layer in a smectic-A membrane", *Physical Review E* **67**, 020701-1-020701-4 (2003).
379. **03TE585:** TEIXEIRA A.V., MORFIN I., EHRBURGER-DOLLE F., ROCHAS C., GEISLER E., LICINIO P., PANINE P., "Scattering from dilute ferrofluid suspensions in soft polymer gels", *Physical Review E* **67**, 021504-1-021504-7 (2003).
380. **03PO586:** PONTONI D., NARAYANAN T., PETIT J.M., GRÜBEL G., BEYSENS D., "Microstructure and dynamics near an attractive colloidal glass transition", *Physical Review Letters* **90**, 188301-1-188301-4 (2003).
381. **03BO587:** BORSALI R., MINATTI E., PUTAUX J.L., SCHAPPACHER M., DEFFIEUX A., VIVILLE P., LAZZARONI R., NARAYANAN T., "From "sunflower-like" assemblies toward giant wormlike micelles", *Langmuir* **19**, 6-9 (2003).
382. **03DU588:** DÜRR A.C., SCHREIBER F., RITLEY K.A., KRUPPA V., KRUG J., DOSCH H., STRUTH B., "Rapid roughening in thin film growth of an organic semiconductor (diindenoperylene)", *Physical Review Letters* **90**, 016104-1-016104-4 (2003).
383. **03LO589:** LORENZ-HAAS C., MÜLLER-BUSCHBAUM P., WUNNICKE O., CASSIGNOL C., BURGHAMMER M., RIEKEL C., STAMM M., "Scanning microfocus small-angle X-ray scattering: A new tool to investigate defects at polymer-polymer interfaces", *Langmuir* **19**, 3056-3061 (2003).
384. **03WE590:** WEBER V., NARAYANAN T., MENDES E., SCHOSSELER F., "Micellar growth in salt-free aqueous solutions of a gemini cationic surfactant: Evidence for a multimodal population of aggregates", *Langmuir* **19**, 992-1000 (2003).
385. **03PI591:** PIGNON F., ALEMDAR A., MAGNIN A., NARAYANAN T., "Small-angle X-ray scattering studies of Fe-Montmorillonite deposits during ultrafiltration in a magnetic field", *Langmuir* **19**, 8638-8645 (2003).
386. **03SC592:** SCHOLLMAYER H., STRUTH B., RIEGLER H., "Long chain *n*-Alkanes at SiO<sub>2</sub>/air interfaces: Molecular ordering, annealing, and surface freezing of triacontane in the case of excess and submonolayer coverage", *Langmuir* **19**, 5042-5051 (2003).
387. **03PO593:** POLUSHKIN E., ALBERDA VAN EKENSTEIN G., DOLBNYA I., BRAS W., IKKALA O., TEN BRINKE G., "In situ *radial* small angle synchrotron X-ray scattering study of shear-induced macroscopic orientation of hierarchically structured comb-shaped supramolecules", *Macromolecules* **36**, 1421-1423 (2003).
388. **03TE594:** TERRY A.E., PHILLIPS T.L., HOBBS J.K., "A real-time wide-angle X-ray scattering study of crystal thickening in ultralong alkanes", *Macromolecules* **36**, 3240-3244 (2003).
389. **03HE595:** HEELEY E.L., MAIDENS A.V., OLMSTED P.D., BRAS W., DOLBNYA I., FAIRCLOUGH J.P.A., TERRILL N.J., RYAN A.J., "Early stages of crystallization in isotactic polypropylene", *Macromolecules* **36**, 3656-3665 (2003).
390. **03LO596:** LORENZEN M., HANFLAND M., "High-resolution X-ray powder diffraction studies of polyethylene and ethylene-octene copolymers: The setting angle", *Macromolecules* **36**, 6095-6099 (2003).

391. **03DI597:** DIAZ-MORENO S., BOWRON D.T., "Determination of the in-solution molecular structure of reactive osmium compounds involved in the synthesis of vicinal diols", *Organometallics* **22**, 390-394 (2003).
392. **03PA598:** PALIN L., LAMBERTI C., KVICK Å., TESTA F., AIELLO R., MILANESIO M., VITERBO D., "Single-crystal synchrotron radiation X-ray diffraction study of B and Ga silicalites compared to a purely siliceous MFI: A discussion of the heteroatom distribution", *Journal of Physical Chemistry B* **107**, 4034-4042 (2003).
393. **03PO599:** PONTONI D., BOLZE J., DINGENOUTS N., NARAYANAN T., BALLAUFF M., "Crystallization of calcium carbonate observed in-situ by combined small- and wide-angle X-ray scattering", *Journal of Physical Chemistry B* **107**, 5123-5125 (2003).
394. **03BA600:** BARBOIU M., VAUGHAN G., GRAFF R., LEHN J.M., "Self-assembly, structure, and dynamic interconversion of metallocsupramolecular architectures generated by Pb(II) binding-induced unfolding of a helical ligand", *Journal of the American Chemical Society* **125**, 10257-10265 (2003).
395. **03BE601:** BELL P.C., BERGSMA M., DOLBANYA I.P., BRAS W., STUART M.C.A., ROWAN A.E., FEITERS M.C., ENGBERTS J.B.F.N., "Transfection mediated by gemini surfactants: Engineered escape from the endosomal compartment", *Journal of the American Chemical Society* **125**, 1551-1558 (2003).
396. **03BE602:** BENTALL M.J., COWLEY R.A., WARD R.C.C., WELLS M.R., STUNAUULT A., "The structure of rare earth thin films: Holmium and gadolinium on yttrium", *Journal of Physics Condensed Matter* **15**, 7155-7174 (2003).
397. **03CO603:** COLE J.M., RAITHBY P.R., WULFF M., SCHOTTE F., PLECH A., TEAT S.J., BUSHNELL-WYE, "Nanosecond time-resolved crystallography of photo-induced species: Case study and instrument development for high-resolution excited-state single-crystal structure determination", *Faraday Discussions* **122**, 119-129 (2002).
398. **03DH604:** DHESI S.S., BENCOK P., BROOKES N.B., VAN DER LAAN G., GALERA R.M., "X-ray magnetic circular dichroism study of SmAl<sub>2</sub> using the *M*<sub>4,5</sub> X-ray absorption edges", *Journal of Applied Physics* **93**, 8337-8339 (2003).
399. **03LA605:** LAMBERTI C., BORDIGA S., BONINO F., PRESTIPINO C., BERLIER G., CAPELLO L., D'ACAPITO F., LLABRES I XAMENA F.X., ZECCHINA A., "Determination of the oxidation and coordination state of copper on different Cu-based catalysts by XANES spectroscopy *in situ* or *in operando* conditions", *Physical Chemistry - Chemical Physics* **5**, 4502-4509 (2003).
400. **03BA606:** BASYARUDDIN M., ABDUL RAHMAN B., BOLTON P.R., EVANS J., DENT A.J., HARVEY I., DIAZ-MORENO S., "Application of stopped flow techniques and energy dispersive EXAFS for investigation of the reactions of transition metal complexes in solution: Activation of nickel beta-diketonates to form homogeneous catalysts, electron transfer reactions involving iron(III) and oxidative addition to iridium(I)", *Faraday Discussions* **122**, 211-222 (2002).
401. **03NE607:** NEWTON M.A., DENT A.J., DIAZ-MORENO S., FIDDY S.G., JYOTI B., EVANS J., "Contrasting dynamic responses of supported Rh nanoparticles to H<sub>2</sub>S and SO<sub>2</sub> and subsequent poisoning of NO reduction by H<sub>2</sub>", *Chemical Communications* **15**, 1906-1907 (2003).
402. **03FI608:** FIDDY S.G., EVANS J., NEWTON M.A., NEISIUS T., TOOZE R.P., OLDMAN R.J., "Extended X-ray absorption fine structure (EXAFS) characterisation of dilute palladium homogeneous catalysts", *Chemical Communications* **15**, 2682-2683 (2003).
403. **03HE609:** HELLIWELL J.R., NIEH Y.P., HABASH J., FAULDER P.F., RAFTERY J., CIANCI M., WULFF M., HAEDENER A., "Time-resolved and static-ensemble structural chemistry of hydroxymethylbilane synthase", *Faraday Discussions* **122**, 131-144 (2002).
404. **03RO610:** ROSCHCHUPKIN D.V., IRZHAK D.V., TUCOULOU R., BUZANOV O.A., "X-ray Bragg diffraction from langasite crystal modulated by surface acoustic wave", *Journal of Applied Physics* **94**, 6692-6696 (2003).

405. **03BU611:** BUSSE G., TSCHENTSCHER T., PLECH A., WULFF M., FREDERICHS B., TECHERT S., "First investigations of the kinetics of the topochemical reaction of *p*-formyl-*trans*-cinnamic acid by time-resolved X-ray diffraction", *Faraday Discussions* **122**, 105-117 (2002).
406. **03HE612:** HEELEY E.L., KIT POH C., LI W., MAIDENS A., BRAS W., DOLBANYA I.P., GLEESON A.J., TERRILL N.J., FAIRCLOUGH J.P.A., OLMSTED P.D., RISTIC R.I., HOUNSLOW M.J., RYAN A.J., "Are metastable, precristallisation, density-fluctuations a universal phenomena?", *Faraday Discussions* **122**, 343-361 (2002).
407. **03MA613:** MACEDO S., ROMAO C.V., MITCHELL E., MATIAS P.M., LIU M.Y., XAVIER A.V., LEGALL J., TEIXEIRA M., LINDLEY P., CARRONDO M.A., "The nature of the di-iron site in the bacterioferritin from *Desulfovibrio desulfuricans*", *Nature Structural Biology* **10**, 285-290 (2003).
408. **03ST614:** STADLER L.M., SEPIOL B., WEINKAMER R., HARTMANN M., FRATZL P., KANTELHARDT J.W., ZONTONE F., GRÜBEL G., VOGL G., "Long-term correlations distinguish coarsening mechanisms in alloys", *Physical Review B* **68**, 180101-1-180101-4 (2003).
409. **03GI615:** GIANNAKOPOULOS K.P., ROTH S., BURGHAMMER M., FELLOUS C., RICHARD D., DUTARTRE D., "Microfocus X-ray study of selective area epitaxy of SiGe on Si", *Journal of Applied Physics* **93**, 259-264 (2003).
410. **03SO616:** SOLAK H.H., DAVID C., GOBRECHT J., DRAKOPOULOS M., "Development of X-ray topographic microscopy for the study of electromigration in interconnects", *Journal of Physics D* **36**, A128-A132 (2003).
411. **03MI617:** MIKULIK P., LÜBBERT D., KORYTAR D., PERNOT P., BAUMBACH T., "Synchrotron area diffractometry as a tool for spatial high-resolution three-dimensional lattice misorientation mapping", *Journal of Physics D* **36**, A74-A78 (2003).
412. **03DR618:** DRAKOPOULOS M., ZEGENHAGEN J., LEE T.L., SNIGIREV A., SNIGIREVA I., CIMALLA V., AMBACHER O., "GaN polarity domains spatially resolved by X-ray standing wave microscopy", *Journal of Physics D* **36**, A214-A216 (2003).
413. **03GR619:** GRIGORIEV D., HANKE M., SCHMIDBAUER M., SCHÄFER P., KONOVALOV O., KÖHLER R., "Grazing incidence X-ray diffraction at free-standing nanoscale islands: Fine structure of diffuse scattering", *Journal of Physics D* **36**, A225-A230 (2003).
414. **03EL620:** ELMOUTAOUAKKIL A., FUCHS G., BERGOUNHON P., PERES R., PEYRIN F., "Three-dimensional quantitative analysis of polymer foams from synchrotron radiation X-ray microtomography", *Journal of Physics D* **36**, A37-A43 (2003).
415. **03GO621:** GOLSHAN M., LAUNDY D., FEWSTER P.F., MOORE M., WHITEHEAD A., BUTLER J.E., KONOVALOV O., "Measuring strain in polycrystalline CVD diamond films", *Journal of Physics D* **36**, A153-A156 (2003).
416. **03HA622:** HATTON P.D., WILKINS S.B., SPENCER P.D., ZIMMERMANN M.V., D'ALMEIDA T., "High energy X-ray scattering studies of strongly correlated oxides", *Journal of Physics D* **36**, A157-A161 (2003).
417. **03LO623:** LORUT F., PERNOT E., PERNOT-REJMANKOVA P., BARUCHEL J., "Devices for low frequency stroboscopic X-ray diffraction imaging", *Journal of Physics D* **36**, A69-A73 (2003).
418. **03KO624:** KORYTAR D., MIKULIK P., FERRARI C., HRDY J., BAUMBACH T., FREUND A., KUBENA A., "Two-dimensional X-ray magnification based on a monolithic beam conditioner", *Journal of Physics D* **36**, A65-A68 (2003).
419. **03SE625:** SENZ V., RÖHLSBERGER R., BANSMANN J., LEUPOLD O., MEIWES-BROER K.H., "Temperature dependence of the magnetization in Fe islands on W(110): Evidence for spin-wave quantization", *New Journal of Physics* **5**, 47.1-47.9 (2003).
420. **03SC626:** SCHETINKIN S.A., WHEELER E., KVARDAKOV V.V., SCHLENKER M., BARUCHEL J., "Observation of the phase coexistence in  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> at the Morin transition by synchrotron radiation white beam section topography", *Journal of Physics D* **36**, A118-A121 (2003).

421. **03NG627:** NGUYEN THI H., JAMGOTCHIAN H., GASTALDI J., HÄRTWIG J., SCHENK T., KLEIN H., BILLIA B., BARUCHEL J., DABO Y., "Preliminary *in situ* and real-time study of directional solidification of metallic alloys by X-ray imaging techniques", *Journal of Physics D* **36**, A83-A86 (2003).
422. **03PE628:** PERNOT-REJMANKOVA P., THOMAS P.A., CLOETENS P., LYFORD T., BARUCHEL J., "Structural matching of ferroelectric domains and associated distortion in potassium titanyl phosphate crystals", *Journal of Physics Condensed Matter* **15**, 1613-1624 (2003).
423. **03WE629:** WENDE H., SCHERZ A., WILHELM F., BABERSCHKE K., "Induced magnetism at thin-film interfaces probed by means of X-ray magnetic circular dichroism", *Journal of Physics Condensed Matter* **15**, S547-S559 (2003).
424. **03MC630:** MCMORROW D.F., NAGLER S.E., MCEWEN K.A., BROWN S.D., "Large enhancement of X-ray magnetic scattering at the L edges of the 5d transition metal antiferromagnet  $K_2ReCl_6$ ", *Journal of Physics Condensed Matter* **15**, L59-L66 (2003).
425. **03GO631:** GOULON J., ROGALEV A., WILHELM F., JAOUEN N., GOULON-GINET C., BROUDER C., "Optical activity probed with X-rays", *Journal of Physics Condensed Matter* **15**, S633-S645 (2003).
426. **03CE632:** CEDOLA A., STANIC V., BURGHAMMER M., LAGOMARSINO S., RUSTICHELLI F., GIARDINO R., NICOLI ALDINI N., FINI M., KOMLEV V., DI FONZO S., "X-ray micro-diffraction analysis of reconstructed bone at Zr prosthetic surface with sub-micrometre spatial resolution", *Physics in Medicine and Biology* **48**, N37-N48 (2003).
427. **03SC633:** SCOPIGNO T., PONTECORVO E., DI LEONARDO R., KRISCH M., MONACO G., RUOCCO G., RUZICKA B., SETTE F., "High-frequency transverse dynamics in glasses", *Journal of Physics Condensed Matter* **15**, S1269-S1278 (2003).
428. **03MA634:** MATTSSON J., MATIC A., MONACO G., ENGBERG D., BÖRJESSON L., "High-frequency collective excitations in a molecular glass-former", *Journal of Physics Condensed Matter* **15**, S1259-S1267 (2003).
429. **03GR635:** GRZECHNIK A., CRICHTON W.A., HANFLAND M., VAN SMAALEN S., "Scheelite  $CaWO_4$  at high pressures", *Journal of Physics Condensed Matter* **15**, 7261-7270 (2003).
430. **03AL636:** ALIANELLI L., SANCHEZ DEL RIO M., FAENOV A.Y., PIKUZ T., FELICI R., HIGNETTE O., "Optical configurations for X-ray imaging by projection", *Journal de Physique IV* **104**, 267-270 (2003).
431. **03HU637:** HUTTEL Y., VAN DER LAAN G., JOHAL T.K., TELLING N.D., BENCOK P., "Induced V and reduced Co magnetic moments at the V/Co interface", *Physical Review B* **68**, 174405-1-174405-6 (2003).
432. **03LE638:** LESCAR J., BRYNDA J., FABRY M., HOREJSI M., REZACOVA P., SEDLACEK J., BENTLEY G.A., "Structure of a single-chain Fv fragment of an antibody that inhibits the HIV-1 and HIV-2 proteases", *Acta Crystallographica D* **59**, 955-957 (2003).
433. **03DI639:** DIEDERICHS K., MCSWEENEY S., RAVELLI R.B.G., "Zero-dose extrapolation as part of macromolecular synchrotron data reduction", *Acta Crystallographica D* **59**, 903-909 (2003).
434. **03HA640:** HALL D.R., KEMP L.E., LEONARD G.A., MARSHALL K., BERRY A., HUNTER W.N., "The organization of divalent cations in the active site of cadmium *Escherichia coli* fructose-1,6-bisphosphate aldolase", *Acta Crystallographica D* **59**, 611-614 (2003).
435. **03PE641:** PEPY G., BALANZAT E., JEAN B., KUKLIN A., SERTOVA N., TOULEMONDE M., "Nanochannels in track-etched membranes", *Journal of Applied Crystallography* **36**, 649-651 (2003).
436. **03KN642:** KNAAPILA M., TORKKELI M., JOKELA K., KISKO K., HORSBURGH L.E., PÅLSSON L.O., SEECK O.H., DOLBNYA I.P., BRAS W., TEN BRINKE G., MONKMAN A.P., IKKALA O., SERIMAA R., "Diffraction analysis of highly ordered smectic supramolecules of conjugated rodlike polymers", *Journal of Applied Crystallography* **36**, 702-707 (2003).

437. **03ZH643:** ZHANG L., LEE W.K., WULFF M., EYBERT L., "The performance of a cryogenically cooled monochromator for an in-vacuum undulator beamline", *Journal of Synchrotron Radiation* **10**, 313-319 (2003).
438. **03AD644:** ADAM J.F., ELLEAUME H., JOUBERT A., BISTON M.C., CHARVET A.M., BALOSSO J., LE BAS J.F., ESTEVE F., "Synchrotron radiation therapy of malignant brain glioma loaded with an iodinated contrast agent: First trial on rats bearing F98 gliomas", *International Journal of Radiation Oncology Biology Physics* **57**, 1413-1426 (2003).
439. **03BE645:** BERGONZO P., BARRETT R., HAINAUT O., TROMSON D., MER C., "Evidence of localised charge build-up mechanisms in CVD diamond as observed using micro-X-ray beam analysis", *Nuclear Instruments and Methods in Physics Research A* **514**, 100-105 (2003).
440. **03HE646:** HEINKINHEIMO P., HELLAND R., SCHRØDER LEIROS H.K., LEIROS I., KARLSEN S., EVJEN G., RAVELLI R., SCHOEHN G., RUIGROK R., TOLLERSUD O.K., MCSWEENEY S., HOUGH E., "The structure of bovine lysosomal  $\alpha$ -mannosidase suggests a novel mechanism for low-pH activation", *Journal of Molecular Biology* **327**, 631-644 (2003).
441. **03FI647:** FIORAVANTI E., HAOUZ A., URSBY T., MUNIER-LEHMANN H., DELARUE M., BOURGEOIS D., "*Mycobacterium tuberculosis* thymidylate kinase: Structural studies of intermediates along the reaction pathway", *Journal of Molecular Biology* **327**, 1077-1092 (2003).
442. **03BA648:** BATTISTON A.A., BITTER J.H., DE GROOT F.M.F., OVERWEG A.R., STEPHAN O., VAN BOKHOVEN J.A., KOOYMAN P.J., VAN DER SPEK C., VANKO G., KONINGSBERGER D.C., "Evolution of Fe species during the synthesis of over-exchanged Fe/ZSM5 obtained by chemical vapor deposition of FeCl<sub>3</sub>", *Journal of Catalysis* **213**, 251-271 (2003).
443. **03GR649:** GRZECHNIK A., BOUVIER P., FARINA L., "High-pressure structure of Li<sub>2</sub>CO<sub>3</sub>", *Journal of Solid State Chemistry* **173**, 13-19 (2003).
444. **03AS650:** ASCENZI M.G., ASCENZI A., BENVENUTI A., BURGHAMMER M., PANZAVOLTA S., BIGI A., "Structural differences between "dark" and "bright" isolated human osteonic lamellae", *Journal of Structural Biology* **141**, 22-33 (2003).
445. **03BO651:** BOUSSET L., BRIKI F., DOUCET J., MELKI R., "The native-like conformation of Ure2p in fibrils assembled under physiologically relevant conditions switches to an amyloid-like conformation upon heat-treatment of the fibrils", *Journal of Structural Biology* **141**, 132-142 (2003).
446. **03BO652:** BOURGEOIS D., VALLONE B., SCHOTTE F., ARCOVITO A., MIELE A.E., SCIARA G., WULFF M., ANFINRUD P., BRUNORI M., "Complex landscape of protein structural dynamics unveiled by nanosecond Laue crystallography", *PNAS* **100**, 8704-8709 (2003).
447. **03XI653:** XIAO B., SPENCER J., CLEMENTS A., ALI-KHAN N., MITTNACHT S., BROCCO C., BURGHAMMER M., PERRAKIS A., MARMORSTEIN R., GAMBLIN S.J., "Crystal structure of the retinoblastoma tumor suppressor protein bound to E2F and the molecular basis of its regulation", *PNAS* **100**, 2363-2368 (2003).
448. **03SM655:** SMILGIES D.M., "Geometry-independent intensity correction factors for grazing-incidence diffraction", *Review of Scientific Instruments* **73**, 1706-1710 (2002).
449. **03PO656:** PONTONI D., FINET S., NARAYANAN T., RENNIE A.R., "Interactions and kinetic arrest in an adhesive hard-sphere colloidal system", *Journal of Chemical Physics* **119**, 6157-6165 (2003).
450. **03AL667:** ALPHEY M.S., GABRIELSEN M., MICOSSI E., LEONARD G.A., MCSWEENEY S.M., RAVELLI R.B.G., TETAUD E., FAIRLAMB A.H., BOND C.S., HUNTER W.N., "Tryparedoxins from *Crithidia fasciculata* and *Trypanosoma brucei*: Photoreduction of the redox disulfide using synchrotron radiation and evidence for a conformational switch implicated in function", *Journal of Biological Chemistry* **278**, 25919-25925 (2003).
451. **03WH668:** WHITTINGHAM J.L., TURKENBURG J.P., VERMA C.S., WALSH M.A., GROGAN G., "The 2-Å crystal structure of 6-Oxo camphor hydrolase. New structural diversity in the crotonase superfamily", *Journal of Biological Chemistry* **278**, 1744-1750 (2003).

452. **03NU669:** NUZZO S., MENEGHINI C., MOBILIOO S., HAAS H., RICCIO P., FASANO A., CAVATORTA P., MORANTE S., "An X-Ray absorption spectroscopy study of the zinc environment in Langmuir-Blodgett phospholipid multilayers", *Biophysical Journal* **83**, 3507-3512 (2002).
453. **03HA670:** HASTON J.L., ENGELSEN S.B., ROESSLE M., CLARCKSON J., BLANCH E.W., BALDOCK C., KIELTY C.M., WESS T.J., "Raman microscopy and X-ray diffraction, a combined study of fibrillin-rich microfibrillar elasticity", *Journal of Biological Chemistry* **278**, 41189-41197 (2003).
454. **03AR671:** ARMENGAUD J., FERNANDEZ B., CHAUMONT V., ROLLIN-GENETET F., FINET S., MARCHETTI C., MYLLYKALLIO H., VIDAUD C., PELLEQUER J.L., GRIBALDO S., FORTERRE P., GANS P., "Identification, purification, and characterization of an eukaryotic-like phosphopantetheine adenylyltransferase (coenzyme A biosynthetic pathway) in the hyperthermophilic archaeon *Pyrococcus abyssi*", *Journal of Biological Chemistry* **278**, 31078-31087 (2003).
455. **03NA672:** NAGY T., NURIZZO D., DAVIES G.J., BIELY P., LAKEY J.H., BOLAM D.N., GILBERT H.J., "The  $\alpha$ -glucuronidase, GlcA67A, of *Cellvibrio japonicus* utilizes the carboxylate and methyl groups of aldobiouronic acid as important substrate recognition determinants", *Journal of Biological Chemistry* **278**, 20286-20292 (2003).
456. **03JE673:** JEPPESEN M.G., ORTIZ P., SHEPARD W., KINZY T.G., NYBORG J., ANDERSEN G.R., "The crystal structure of the glutathione *S*-Transferase-like domain of elongation factor 1B $\alpha$  from *Saccharomyces cerevisiae*", *Journal of Biological Chemistry* **278**, 47190-47198 (2003).
457. **03RE675:** RECEVEUR V., CZYZEK M., SCHÜLEIN M., PANINE P., HENRISSAT B., "Dimension, shape, and conformational flexibility of a two domain fungal cellulase in solution probed by small angle X-ray scattering", *Journal of Biological Chemistry* **277**, 40887-40892 (2002).
458. **03LA676:** LAI-KEE-HIM J., CHANZY H., MÜLLER M., PUTAUX J.L., IMAI T., BULONE V., "In vitro versus in vivo cellulose microfibrils from plant primary wall synthases: Structural differences", *Journal of Biological Chemistry* **277**, 36931-36939 (2002).
459. **03HA677:** HALL D.R., BOND C.S., LEONARD G.A., WATT C.I., BERRY A., HUNTER W.N., "Structure of tagatose-1,6-bisphosphate aldolase. Insight into chiral discrimination, mechanism, and specificity of class II aldolases", *Journal of Biological Chemistry* **277**, 22018-22024 (2002).
460. **03LE678:** LESCAR J., LORIS R., MITCHELL E., GAUTIER C., CHAZALET V., COX V., WYNS L., PEREZ S., BRETON C., IMBERTY A., "Isolectins I-A and I-B of *Griffonia (Bandeiraea) simplicifolia*. Crystal structure of metal-free GS I-B $_4$  and molecular basis for metal binding and monosaccharide specificity", *Journal of Biological Chemistry* **277**, 6608-6614 (2002).
461. **03MA679:** MARTIN-BADOSA E., AMBLARD D., NUZZO S., ELMOUTAOUAKKIL A., VICO L., PEYRIN F., "Excised bone structures in mice: Imaging at three-dimensional synchrotron radiation micro CT", *Radiology* **229**, 921-928 (2003).
462. **03LO680:** LONGHI S., RECEVEUR-BRECHOT V., KARLIN D., JOHANSSON K., DARBON H., BHELLA D., YEO R., FINET S., CANARD B., "The C-terminal domain of the measles virus nucleoprotein is intrinsically disordered and folds upon binding to the C-terminal moiety of the phosphoprotein", *Journal of Biological Chemistry* **278**, 18638-18648 (2003).
463. **03MO681:** MOECKLI R., VERDUN F.R., FIEDLER S., PACHOUD M., BULLING S., SCHNYDER P., VALLEY J.F., "Influence of scatter reduction method and monochromatic beams on image quality and dose in mammography", *Medical Physics* **30**, 3156-3164 (2003).
464. **03CI682:** CIOCI G., MITCHELL E.P., GAUTIER C., WIMMEROVA M., SUDAKEVITZ D., PEREZ S., GILBOA-GARBER N., IMBERTY A., "Structural basis of calcium and galactose recognition by the lectin PA-IL of *Pseudomonas aeruginosa*", *FEBS Letters* **555**, 297-301 (2003).
465. **03PE683:** PETKOV N., MINTOVA S., JEAN B., METZGER T., BEIN T., "Functionalized cubic mesostructured silica films", *Materials Science and Engineering C* **23**, 827-831 (2003).
466. **03CA684:** CASERI W.R., CHANZY H.D., FELDMAN K., FONTANA M., SMITH P., TERVOORT T.A., GOOSSENS J.G.P., MEIJER E.W., SCHENNING A.P.H.J., DOLBANYA I.P., DEBIJE M.G., DE HAAS M.P., WARMAN J.M., VAN DE CRAATS A.M., FRIEND R.H., SIRRINGHAUS H.,

- STUTZMANN N., ""(Hot-)water-proof", semiconducting, platinum-based chain structures: Processing, products, and properties", *Advanced Materials* **15**, 125-129 (2003).
467. **03MA685:** MCLEAN E.J., MCGRATH C.M., O'CONNOR C.J., SANGREGORIO C., SEDDON J.M.W., SINN E., SOWREY F.E., TEAT S.J., TERRY A.E., VAUGHAN G.B.M., YOUNG N.A., "Structural study of the thermal and photochemical spin states in the spin crossover complex  $[\text{Fe}(\text{phen})_2(\text{NCSe})_2]$ ", *Chemistry - A European Journal* **9**, 5314-5322 (2003).
468. **03BA686:** BARBOIU M., VAUGHAN G., KYRITSAKAS N., LEHN J.M., "Dynamic chemical devices: Generation of reversible extension/contraction molecular motion by ion-triggered single/double helix interconversion", *Chemistry - A European Journal* **9**, 763-769 (2003).
469. **03RU687:** RUBEN M., BREUNING E., LEHN J.M., KSENOFONTOV V., RENZ F., GUETLICH P., VAUGHAN G.B.M., "Supramolecular spintronic devices: Spin transitions and magnetostructural correlations in  $[\text{Fe}_4^{\text{II}}\text{L}_4]^{8+}$  [2x2]-grid-type complexes", *Chemistry - A European Journal* **9**, 4422-4429 (2003).
470. **03BA688:** BAK-MISIUK J., SHALIMOV A., KANIEWSKI J., MISIUK A., DYNOWSKA E., REGINSKI K., TRELA J., PRZESLAWSKI T., HARTWIG J., "Stress-induced structural changes in thin InAs layers grown on GaAs substrate", *Crystal Research and Technology* **38**, 302-306 (2003).
471. **03GA689:** GAUTHIER O., KHAIROUN I., BOSCO J., OBADIA L., BOURGES X., RAU C., MAGNE D., BOULER J.M., AGUADO E., DACULSI G., WEISS P., "Noninvasive bone replacement with a new injectable calcium phosphate biomaterial", *Journal of Biomedical Materials Research A* **66A**, 47-54 (2003).
472. **03KR690:** KRISCH M., "Status of phonon studies at high pressure by inelastic X-ray scattering", *Journal of Raman spectroscopy* **34**, 628-632 (2003).
473. **03BE691:** BELINA G., URBAN V., STRAUBE E., PYCKHOUT-HINTZEN W., KLÜPPEL M., HEINRICH G., "Microscopic deformation of filler particles in rubber under uniaxial deformation", *Macromolecules Symposium* **200**, 121-128 (2003).
474. **03AN692:** ANDREOLETTI P., SAINZ G., JAQUINOD M., GAGNON J., JOUVE H.M., "High-resolution structure and biochemical properties of a recombinant *Proteus mirabilis* catalase depleted in iron", *Proteins: Structure, Function and Genetics* **50**, 261-271 (2003).
475. **03VI694:** VINCZE L., RIEKEL C., "Status and perspectives of capillary optics at a third-generation synchrotron radiation source", *X-Ray Spectrometry* **32**, 208-214 (2003).
476. **03WE695:** WEBSTER P.J., HUGHES D.J., MILLS G., VAUGHAN G.B.M., "Synchrotron X-ray measurements of residual stress in a worn railway train", *Materials Science Forum* **404-407**, 767-772 (2002).
477. **03JA696:** JAMES M.N., BRADLEY G.R., HATTINGH D.G., HUGHES D.J., WEBSTER P.J., "Residual stresses, defects and fatigue cycling in friction stir butt welds in 5383-H321 and 5083-H321 aluminium alloys", *Materials Science Forum* **426-432**, 2915-2920 (2003).
478. **03NU700:** NUZZO S., LAFAGE-PROUST M.H., MARTIN-BADOSA E., BOIVIN G., THOMAS T., ALEXANDRE C., PEYRIN F., "Synchrotron radiation microtomography allows the analysis of three-dimensional microarchitecture and degree of mineralization of human iliac crest biopsy specimens: Effects of etidronate treatment", *Journal of Bone and Mineral Research* **17**, 1372-1382 (2002).
479. **03PA701:** PADILLA F., PEYRIN F., LAUGIER P., "Prediction of backscatter coefficient in trabecular bones using a numerical model of three-dimensional microstructure", *Journal of the Acoustical Society of America* **113**, 1122-1129 (2003).
480. **03NU702:** NUZZO S., MENEGHINI C., BRAILLON P., BOUVIER R., MOBILIO S., PEYRIN F., "Microarchitectural and physical changes during fetal growth in human vertebral bone", *Journal of Bone and Mineral Research* **18**, 760-768 (2003).
481. **03LI703:** LICHTENEGGER H.C., MÜLLER M., WIMMER R., FRATZL P., "Microfibril angles inside and outside crossfields of Norway spruce tracheids", *Holzforschung* **57**, 13-20 (2003).

482. **03BO704:** BONNASSIE A., PEYRIN F., ATTALI D., "A new method for analyzing local shape in three-dimensional images based on medial axes transformation", *IEEE Transactions on Systems, Man, and Cybernetics* **33**, 700-705 (2003).
483. **03MA705:** MARTIN-BADOSA E., ELMOUTAOUAKKIL A., NUZZO S., AMBLARD D., VICO L., PEYRIN F., "A method for the automatic characterization of bone architecture in 3D mice microtomographic images", *Computerized Medical Imaging and Graphics* **27**, 447-458 (2003).
484. **03PO707:** POSPISIL P., HAUMANN M., DITTMER J., SOLE V.A., DAU H., "Stepwise transition of the tetra-manganese complex of photosystem II to a binuclear  $Mn_2(\mu-O)_2$  complex in response to a temperature jump: A time-resolved structural investigation employing X-ray absorption spectroscopy", *Biophysical Journal* **84**, 1370-1386 (2003).
485. **03ME708:** MENEGHINI C., DALCONI M.C., NUZZO S., MOBILIO S., WENK R.H., "Rietveld refinement on X-ray diffraction patterns of bioapatite in human fetal bones", *Biophysical Journal* **84**, 2021-2029 (2003).
486. **03RE709:** RECONDITI M., KOUASSOVA N., LINARI M., DOBBIE I., NARAYANAN T., DIAT O., PIAZZESI G., LOMBARDI V., IRVING M., "The conformation of myosin head domains in rigor muscle determined by X-ray interference", *Biophysical Journal* **85**, 1098-1110 (2003).
487. **03WI710:** WINDT D.L., DONGUY S., HAILEY C.J., KOGLIN J., HONKIMÄKI V., ZIEGLER E., CHRISTENSEN F.E., CHEN H., HARRISON F.A., CRAIG W.W., "W/SiC X-ray multilayers optimized for use above 100keV", *Applied Optics* **42**, 2415-2421 (2003).
488. **03DM711:** DMITRIEV V.P., KUZNETSOV A.Y., MACHON D., WEBER H.P., TOLEDANO P., "Phase transition mechanisms in lanthanide elemental crystals", *Europhysics Letters* **61**, 783-789 (2003).
489. **03SC712:** SCHROER C.G., MEYER J., KUHLMANN M., BENNER B., GÜNZLER T.F., LENGELER B., RAU C., WEITKAMP T., SNIGIREV A., SNIGIREVA I., "Nano-tomography based on hard X-ray microscopy with refractive lenses", *Journal de Physique IV* **104**, 271 (2003).
490. **03CO713:** COMEZ L., FIORETTO D., SCARPONI F., MONACO G., "Density fluctuations in the intermediate glass-former glycerol: A Brillouin light scattering study", *Journal of Chemical Physics* **119**, 6032-6043 (2003).
491. **03ZH714:** ZHANG J., BERGE B., MEEUSSEN F., NIES E., BERGHMANS H., SHEN D., "Influence of the interactions in aqueous mixtures of poly(vinyl methyl ether) on the crystallization behavior of water", *Macromolecules* **36**, 9145-9153 (2003).
492. **03KO715:** KOHN V.G., CHUMAKOV A.I., "The theory of incoherent scattering of synchrotron radiation by vibrating nuclei in a crystal", *Journal of Physics Condensed Matter* **14**, 11875-11887 (2002).
493. **03DA716:** DAVIES R.J., MONTES-MORAN M.A., RIEKEL C., YOUNG R.J., "Single fibre deformation studies of poly(*p*-phenylene benzobisoxazole) fibres. Part II Variation of crystal strain and crystallite orientation across the fibre", *Journal of Materials Science* **38**, 2105-2115 (2003).
494. **03MI717:** MINTOVA S., JEAN B., METZGER T.H., BEIN T., "Crystal growth of nanosized zeolites in solutions and films: *In situ* grazing incidence diffraction (GID) study using synchrotron X-ray radiation", *Journal of Materials Science Letters* **22**, 751-753 (2003).
495. **03GA720:** GAMBARDELLA P., RUSPONI S., VERONESE M., DHESI S.S., GRAZIOLI C., DALLMEYER A., CABRIA I., ZELLER R., DEDERICHS P.H., KERN K., CARBONE C., BRUNE H., "Giant magnetic anisotropy of single cobalt atoms and nanoparticles", *Science* **300**, 1130-1133 (2003).
496. **03SO721:** SÖLLNER C., BURGHAMMER M., BUSCH-NENTWICH E., BERGER J., SCHWARZ H., RIEKEL C., NICOLSON T., "Control of crystal size and lattice formation by starmaker in otolith biomineralization", *Science* **302**, 282-286 (2003).

497. **03GI722:** GIDALEVITZ D., ISHITSUKA Y., MURESAN A.S., KONOVALOV O., WARING A.J., LEHRER R.I., LEE K.Y.C., "Interaction of antimicrobial peptide protegrin with biomembranes", *PNAS* **100**, 6302-6307 (2003).
498. **03MI723:** MIALLAU L., ALPHEY M.S., KEMP L.E., LEONARD G.A., MCSWEENEY S.M., HECHT S., BACHER A., EISENREICH W., ROHDICH F., HUNTER W.N., "Biosynthesis of isoprenoids: Crystal structure of 4-diphosphocytidyl-2c-methyl-D-erythritol kinase", *PNAS* **100**, 9173-9178 (2003).
499. **03VA724:** VALERY C., PATERNOSTRE M., ROBERT B., GULIK-KRZYWICKI T., NARAYANAN T., DEDIEU J.C., KELLER G., TORRES M.L., CHERIF-CHEIKH R., CALVO P., ARTZNER F., "Biomimetic organization: Octapeptide self-assembly into nanotubes of viral capsid-like dimension", *PNAS* **100**, 10258-10262 (2003).
500. **03DE725:** DECREMPS F., DATCHI F., SAITTA A.M., POLIAN A., PASCARELLI S., DI CICCO A., ITIE J.P., BAUDELET F., "Local structure of condensed zinc oxide", *Physical Review B* **68**, 104101-1-104101-10 (2003).
501. **03RO726:** ROBERT A., ELLEAUME P., "Recent developments at the ESRF radiation source", *Synchrotron Radiation News* **16**, 37-42 (2003).
502. **03RU727:** RUOCCO G., SETTE F., "Inelastic X-ray scattering: A new spectroscopy tool to investigate the atomic dynamics in condensed matter", , ().
503. In : "Conference proceedings. vol.82: Synchrotron radiation: Fundamentals, methodologies and applications " MOBILIO S., VLAIC G. (Ed.) (Italian Physical Society, 2003) pp. 623-658.
504. **03BA728:** BADRO J., FIQUET G., GUYOT F., RUEFF J.P., STRUZHUKIN V.V., VANKO G., MONACO G., "Iron partitioning in earth's mantle: Toward a deep lower mantle discontinuity", *Science* **300**, 789-791 (2003).
505. **03MA729:** MARQUES L., MEZOUAR M., HODEAU J.L., NUNEZ-REGUEIRO M., "Ordering mechanism in high-pressure polymerization of C<sub>60</sub>: Avoiding geometrical frustration by stress-driven bond selection", *Physical Review B* **68**, 193408-1-193408-4 (2003).
506. **03ME730:** MEZOUAR M., MARQUES L., HODEAU J.L., PISCEDDA V., NUNEZ-REGUEIRO M., "Equation of state of an anisotropic three-dimensional C<sub>60</sub> polymer: The most stable form of fullerene", *Physical Review B* **68**, 193414-1-193414-4 (2003).
507. **03CH731:** CHERNYSHEV V.V., MACHON D., FITCH A.N., ZAITSEV S.A., YATSENKO A.V., SHMAKOV A.N., WEBER H.P., "Protonation site and hydrogen bonding in anhydrous and hydrated crystalline forms of doxazosin mesylate from powder data", *Acta Crystallographica B* **59**, 787-793 (2003).
508. **03BA734:** BARBOIU M., VAUGHAN G., VAN DER LEE A., "Self-organized heteroditopic macrocyclic superstructures", *Organic letters* **5**, 3073-3076 (2003).
509. **03VA735:** VAN REEUWIJK S.J., PUIG-MOLINA A., MATHON O., TUCOULOU R., GRAAFSMA H., "Time-resolved X-ray diffraction study of the relaxation process of electric-field-induced strain in KD<sub>2</sub>PO<sub>4</sub>", *Journal of Applied Physics* **94**, 6708-6716 (2003).
510. **03SH737:** SHUKLA A., CALANDRA M., D'ASTUTO M., LAZZERI M., MAURI F., BELLIN C., KRISCH M., KARPINSKI J., KAZAKOV S.M., JUN J., DAGHERO D., PARLINSKI K., "Phonon dispersion and lifetimes in MgB<sub>2</sub>", *Physical Review Letters* **90**, 095506-1-095506-4 (2003).
511. **03BR738:** BRAS W., "SAXS/WAXS experiments using extreme sample environments", *Nuclear Instruments and Methods in Physics Research B* **199**, 90-97 (2003).
512. **03PO739:** POULOPOULOS P., SCHERZ A., WILHELM F., WENDE H., BABERSCHKE K., "Direct probe of induced magnetic moments at interfaces via X-ray magnetic circular dichroism", *Physica Status Solidi (a)* **189**, 293-300 (2002).
513. **03BA740:** BARNES J.D., BRAS W., "Temperature-dependent three-dimensional small-angle scattering in semicrystalline polymers", *Journal of Applied Crystallography* **36**, 664-668 (2003).

**ESRF Publications 2002-2003**

514. **03KU741:** KUZNETSOV A.Y., DMITRIEV V.P., BANDILET O.I., WEBER H.P., "High-temperature fcc phase of Pr: Negative thermal expansion and intermediate valence state", *Physical Review B* **68**, 064109-1-064109-6 (2003).
515. **03BO742:** BOURGEOIS D., VERNEDE X., ADAM V., FIORAVANTI E., URSBY T., "A microspectrophotometer for UV visible absorption and fluorescence studies of protein crystals", *Journal of Applied Crystallography* **35**, 319-326 (2002).