

Bibliography of selected ID10A publications

2011 (partial)

[258] Evolution of dynamics and structure during formation of a cross-linked polymer gel

O. Czakkel and A. Madsen,
EPL, **95** 28001 (2011)

[257] Development of a Hard X-ray Delay Line for X-ray Photon Correlation Spectroscopy and Jitter-Free Pump-Probe Experiments at X-ray Free Electron Laser sources

W. Roseker, H. Franz, H. Schulte-Schrepping, A. Ehnes, O. Leupold, F. Zontone, S. Lee, A. Robert and G. Gruebel,
J. Synchrotron Rad. **18**, 481 (2011)

[256] A small-angle scattering chamber for x-ray photon correlation spectroscopy at low temperatures

Ricardo Steinmann, Yuriy Chushkin, Chiara Caronna, Joel Chavanne, and Anders Madsen ,
Rev. Sci. Instrum. **82**, 025109 (2011)

[255] Dynamics of hard sphere suspensions using dynamic light scattering and X-ray photon correlation spectroscopy: Dynamics and scaling of the intermediate scattering function

V. A. Martinez, J. H. J. Thijssen, F. Zontone, W. van Megen, and G. Bryant ,
J. Chem. Phys. **134**, 054505 (2011)

2010

[254] Macroscopic and microscopic investigation of the antiferromagnetic phase of TbB6

Amara M. , Galéra R.M. , Aviani I. , Givord F.
Physical Review B **82**, 224411 (2010)

[253] Slow dynamics of a colloidal lamellar phase

D. Constantin, P. Davidson, E. Freyssingeas, and A. Madsen,
J. Chem. Phys. **133**, 224902 (2010)

[252] Dynamics and rheology under continuous shear flow studied by XPCS

A. Fluerasu, P. Kwasniewski, C. Caronna, F. Destremaut, J.-B. Salmon and A. Madsen,
New Journal of Physics **12**, 035023 (2010)

[251] Dynamic correlation in magnetorheological composite under magnetic field studied by XPCS

H. Grigoriew, L. Wiegart, A. Boczkowska, M. Mirkowska
Solid State Comm. **150**, 840 (2010)

[250] XPCS study of dynamic correlation in polyurethane gel-carbonyl iron composite under magnetic field

H. Grigoriew, L. Wiegart, A. Boczkowska and M. Mirkowska
J. Phys.: Conf. Ser. **247**, 012048 (2010)

[249] Structure and dynamics of glassy charged colloids studied with coherent small angle X-ray scattering

Fischer B. , Wagner J. , Gutt C. , Westermeier F. , Grübel G.
Journal of Physics : Conference Series **247**, 012026 (2010)

[248] Microphase structure of poly(N-isopropylacrylamide) hydrogels as seen by small- and wide-angle X-ray scattering and pulsed field gradient NMR

K. László, A. Guillermo, A. Fluerasu, A. Moussaïd, E. Geissler
Langmuir **26**, 4415 (2010)

[247] Deswelling kinetics of PNIPA gels

K. László, A. Fluerasu, A. Moussaïd and E. Geissler
Soft Matter **6**, 4335 (2010)

[246] Beyond simple exponential time-correlation functions and equilibrium dynamics in XPCS

A. Madsen, R. L. Leheny, H. Guo, M. Sprung and O. Czakkel,
New Journal of Physics **12**, 055001 (2010)

[245] Slow dynamics in an azopolymer molecular layer studied by x-ray photon correlation spectroscopy

D. Orsi, L. Cristofolini, M. P. Fontana, E. Pontecorvo, C. Caronna, A. Fluerasu, F. Zontone, and A. Madsen
Phys. Rev. E **82**, 031804 (2010)

[244] Microscopic dynamics in nanocomposite photosensitive films studied by X-ray photon correlation spectroscopy

D. Orsi, L. Cristofolini, M. P. Fontana, E. Pontecorvo, C. Caronna, A. Fluerasu, F. Zontone, and A. Madsen
Philosophical Magazine 1478-6435 (2010)

[243] Short-range dynamics of a nematic liquid-crystalline phase,

A. S. Poulos, D. Constantin, P. Davidson, B. Pansu, E. Freyssingéas, A. Madsen, C. Chaneac,
J. Chem. Phys. **132**, 091101 (2010)

[242] Concentration fluctuations in a binary glass former investigated by x-ray photon correlation spectroscopy

S. Schramm, T. Blochowicz, E. Gouirand, R. Wipf, B. Stühn, and Y. Chushkin
J. Chem. Phys. **132**, 224505 (2010)

[241] Measuring the source brilliance at an undulator beamline

F. Zontone, A. Madsen, and O. Konovalov, 10th International Conference on Synchrotron Radiation Instrumentation, Melbourne 27/9-2/10, 2009. *AIP conference proceedings* **1234**, 613 (2010)

2009

[240] Hard x-ray phase contrast imaging of black lipid membranes

A. Beerlink, M. Mell, M. Tolkiehn, and T. Salditt
Appl. Phys. Lett. **95**, 203703 (2009)

[239] Two-dimensional heterogeneous dynamics at the surface of a colloidal suspension

A. Duri, T. Autenrieth, L.-M. Stadler, O. Leupold, Y. Chushkin, G. Grubel, C. Gutt,
Phys. Rev. Lett. **102**, 145701, (2009)

[238] Structure and short-time dynamics in suspensions of charged silica spheres in the entire fluid regime

J. Gapinski, A. Patkowski, A. J. Banchio, J. Buitenhuis, P. Holmqvist, M. P. Lettinga, G. Meier, and G. Nägele

J. Chem. Phys. **130**, 084503 (2009)

[237] Measuring temporal speckle correlations at ultrafast x-ray sources

C. Gutt, L.-M. Stadler, A. Duri, T. Autenrieth, O. Leupold, Y. Chushkin, G. Grubel,

Optics Express, **17**, 55, (2009)

[236] [Dynamics of a colloid-stabilized cream](#)

E. M. Herzig, A. Robert, D. D. van 't Zand, L. Cipelletti, P. N. Pusey, and P. S. Clegg

Phys. Rev. E **79**, 011405 (2009)

[235] Atomic diffusion studied with coherent X-rays

M. Leitner, B. Sepiol, L. M. Stadler, B. Pfau, and G. Vogl

Nature Materials **8**, 171 (2009)

[234] Cryogenic x-ray diffraction microscopy for biological samples

E. Lima, L. Wiegart, P. Pernot, M. Howells, J. Timmins, F. Zontone, and A. Madsen

Phys. Rev. Lett. **103**, 198102 (2009)

[233] Liquid-Crystalline Nematic Phase in Aqueous Suspensions of a Disk-Shaped Natural Deidellite Clay.

E. Paineau, K. Antonova, C. Baravian, I. Bihannic, P. Davidson, I. Dozov, M. Imperor-Clerc, P. Levitz, A. Madsen, F. Meneau, L. Michot,

J. Phys. Chem. B **113**, 15858 (2009)

[232] DNA melting by RNA polymerase at the T7A1 promoter precedes the rate-limiting step at 37° C and results in the accumulation of an off-pathway intermediate

A. Rogozina, E. Zaychikov, M. Buckle, H. Heumann, B. Sclavi

Nucleic Acids Research **37**, 5390-5404 (2009)

[231] Performance of a ps X-ray Delay Line unit at 8.39 keV

W. Roseker, H. Franz, H. Schulte-Schrepping, A. Ehnes, O. Leupold, A. Robert, F. Zontone, G. Gruebel

Optics Letters **34**, 1768 (2009)

[230] Fourier transform holography in the context of coherent diffraction imaging with hard X-rays

L.-M. Stadler, C. Gutt, T. Autenrieth, O. Leupold, S. Rehbein, Y. Chushkin, G. Grubel

Physica Status Solidi A - Applications and Materials Science **206**, 1846 (2009)

[229] Structural changes at the Verwey transition in Fe₃O₄

W. Tabis, J. Kusz, N. T. H. Kim-Ngan, Z. Tarnawski, F. Zontone, Z. Kakol, A. Kozlowski

Radiation Physics and Chemistry **78**, S93 (2009)

[228] Repulsive and attractive ferroglasses: a SAXS and XPCS study

E. Wandersman, Y. Chushkin, E. Dubois, V. Dupuis, G. Demouchy, A. Robert and R. Perzynski

Brazilian Journal of Physics **39**, 210 (2009)

[227] X-ray Cross Correlation Analysis Uncovers Hidden Local Symmetries in Disordered Matter

P. Wochner, C. Gutt, T. Autenrieth, T. Demmer, V. Bugaev, A. Díaz Ortiz, A. Duri, F. Zontone, G. Grubel, H. Dosch,

Proc. Natl. Acad. Sci. **106**, 11511 (2009).

2008

[226] Advances in synchrotron hard X-ray based imaging

J. Baruchel, P. Bleuet, A. Bravin, P. Coan, E. Lima, A. Madsen, W. Ludwig, P. Pernot, and J. Susini

Comptes Rendus Physique **9**, p. 624-641 (2008)

[225] Dynamics of nano-particles in a shear flow studied by XPCS

S. Busch, T. Haugaard Jensen, Y. Chushkin, and A. Fluerasu

Eur. Phys. J. E, **26**, 55, (2008)

[224] Dynamics of nanoparticles in a supercooled solvent

C. Caronna, Y. Chushkin, A. Madsen, and A. Cupane

Phys. Rev. Lett. **100**, 055702 (2008)

[223] X-ray-scattering information obtained from near-field speckle

R. Cerbino, L. Peverini, M. A. C. Potenza, A. Robert, P. Bösecke, and M. Giglio

Nature Physics **4**, 238 (2008)

[222] Low-frequency elastic behavior of a supercooled liquid

Y. Chushkin, C. Caronna, and A. Madsen

Europhys. Lett. **83**, 36001 (2008)

[221] X-ray photon correlation spectroscopy under flow

A. Fluerasu, A. Moussaid, P. Falus, H. Gleyzolle, and A. Madsen

J. Sync. Rad. **15**, 378 (2008)

[220] Resolution effects in surface sensitive X-ray photon correlation spectroscopy experiments

T. Ghaderi, C. Gutt, M. Sprung, S. Streit, A. Madsen, F. Zontone, G. Grübel, M. Tolan and S. K. Sinha

Phys. Rev. B (to be submitted)

[219] Induction of local strain defects in collagen axial structure

J. Glab, O. Paris, L.-M. Stadler, K. Thomas, A. Madsen, P. Fratzl and T. Wess

Biophysical journal (to be submitted)

[218] X-ray Photon Correlation Spectroscopy (XPCS)

G. Grübel, A. Madsen and A. Robert in *Soft Matter Scattering, Imaging and Manipulation Borsali, Redouane; Pecora, Robert (Eds.), Springer (2008)*

[217] Structure, Morphology, and Growth Dynamics of Perfluoro-Pentacene Thin Films

S. Kowarik, A. Gerlach, A. Hinderhofer, S. Milita, F. Borgatti, F. Zontone, T. Suzuki, F. Biscarini, and F. Schreiber

Physica Status Solidi, Rapid Research Letters, Vol. 3 (2008)120-122.

[216] Structure determination in thin film geometry using grazing incidence small-angle scattering

P. Müller-Buschbaum

In: "Polymer Surfaces and Interfaces. Characterization, modification and applications", Stamm M. (Eds.) (Springer Verlag, 2008) pp.17-46

[215] Structure and dynamics of a colloidal suspension studied by means of XPCS

Patkowski, J. Gapinski, A. Fluerasu, P. Holmqvist, G. Meier, M. P. Lettinga and G. Nägele

[214] Dynamics in dense suspensions of charge-stabilized colloidal particles

A. Robert, J. Wagner, W. Härtl, T. Autenrieth, and G. Grübel
Eur. Phys. J. E **25**, 77 (2008)

[213] Unaffected microscopic dynamics of macroscopically arrested water in dilute clay gels

T. Seydel, L. Wiegart, F. Juranyi, B. Struth, and H. Schober
Phys. Rev. E **78**, 061403 (2008)

[212] Dynamics and critical damping of capillary waves in an ionic liquid

E. Sloutskin, P. Huber, M. Wolff, B. M. Ocko, A. Madsen, M. Sprung, V. Schoen, J. Baumert, and M. Deutsch, *Phys. Rev. E* **77**, 060601(R) (2008)

[211] Hard X-ray holographic diffraction imaging

L.-M. Stadler, C. Gutt, T. Autenrieth, O. Leupold, S. Rehbein, Y. Chushkin, and G. Grübel
Phys. Rev. Lett. **100**, 245503 (2008)

[210] An ultrahigh vacuum system for in situ studies of thin films and nanostructures

S. Stankov, R. Ruffer, M. Sladeczek, M. Rennhofer, B. Sepiol, G. Vogl, N. Spiridis, T. Slezak, J. Korecki, *Rev. Sci. Instr.* **79**, 045108 (2008)

[209] Probing heterogeneous dynamics of a repulsive colloidal glass by time resolved X-ray correlation spectroscopy

E. Wandersman, A. Duri, A. Robert, E. Dubois, V. Dupuis, and R. Perzynski
J. Phys.: Cond. Matt. **20**, 155104 (2008)

2007

[208] The dynamic behavior of magnetic colloids in suspension

T. Autenrieth, A. Robert, J. Wagner and G. Grübel
J. Appl. Cryst. **40** (Suppl.), 250 (2007)

[207] Dynamics during a transient gelation process studied by XPCS

A. Fluerasu, A. Moussaïd, A. Madsen and A. Schofield
Phys. Rev. E **76**, 010401(R) (2007)

[206] Collective diffusion in charge stabilized suspensions: Concentration and salt effects

J. Gapinski, A. Patkowski, A. J. Banchio, P. Holmquist, G. Meier, M. P. Lettinga, and G. Nägele
J. Chem. Phys. **126**, 104905 (2007)

[205] X-ray Photon Correlation Spectroscopy of Dynamics in Thermo sensitive Gels

E. Geissler, K. Kosik, A. Fluerasu, A. Moussaïd, K. László
Macromolecular Symposia **256**, 7379 (2007)

[204] Partially wetting thin liquid films: Structure and dynamics studied with coherent X-rays

C. Gutt, M. Sprung, R. Fendt, A. Madsen, S. K. Sinha and M. Tolan
Phys. Rev. Lett. **99**, 096104 (2007)

[203] X-ray fluorescence correlation spectroscopy - a tool to study element-specific dynamics

O. Leupold, G. Grübel, S. V. Roth, C. Schroer, W. Roseker, M. Sikorski and A. Robert
J. Appl. Cryst. **40** (Suppl.), 283 (2007)

[202] Surface Diffusion and Island Growth

R. Reitinger, B. Pfau, L.-M. Stadler, S. Stankov, M. Zajac, N. Spiridis, B. Sepiol, F. Zontone and J. Korecki, *Defect and Diffusion Forum Vol.* **263**, 177-182 (2007)

[201] Morphology of Fe/MgO(001) ultra thin films

R. Reitinger, B. Sepiol, G. Vogl, B. Pfau, L.-M. Stadler, S. Stankov, F. Zontone, N. Spiridis, and J. Korecki, *J. Appl. Phys.* **102**, 034310 (2007)

[200] Measurement of self-diffusion constant with two-dimensional X-ray photon correlation spectroscopy

A. Robert
J. Appl. Cryst. **40** (Suppl.), 34 (2007)

[199] The SrTiO₃ displacive transition revisited by coherent X-ray diffraction

S. Ravy, D. Le Bolloc'h, R. Currat, A. Fluerasu, C. Mocuta and B. Dkhil
Phys. Rev. Lett. **98**, 105501 (2007)

[198] Two-dimensional dynamics of metal nano-particles on the surface of thin polymer films studied with coherent X-rays

S. Streit, C. Gutt, V. Chamard, A. Robert, M. Sprung, H. Sternemann and M. Tolan
Phys. Rev. Lett. **98**, 047801 (2007)

[197] Magnetic and structural studies of magnetite at the Verwey transition

W. Tabis, Z. Tarnawski, Z. Kakol, G. Krol, A. Kolodziejczyk, A. Kozlowski, A. Fluerasu, J.M. Honig
Journal of Alloys and Compounds **442**, 203 (2007)

[196] Investigation of q-dependent dynamical heterogeneity in a colloidal gel by x-ray photon correlation spectroscopy

V. Trappe, E. Pitard, L. Ramos, A. Robert, H. Bissig, and L. Cipelletti
Phys. Rev. E **76**, 051404 (2007)

2006

[195] Many-Body Hydrodynamic Interactions in Charge-Stabilized Suspensions

A. J. Banchio, J. Gapinski, A. Patkowski, W. Häußler, A. Fluerasu, S. Sacanna, P. Holmqvist, G. Meier, M. P. Lettinga, and G. Nägele
Phys. Rev. Lett. **96**, 138303 (2006)

[194] GISAXS studies of self-assembling of colloidal Co nanoparticles

Y. Chushkin, L. Chuti, Y. Halahovets, S. Luby, E. Majkova, A. Satka, G. Leo, M. Giersig, M. Hilgendorff, V. Holy, O. Konovalov
Materials Science and Engineering C **26**, 1136-1140 (2006)

[193] Dynamics of bulk fluctuations in a lamellar phase studied by coherent X-ray scattering

D. Constantin, G. Brotons, T. Salditt, E. Freyssingeas and A. Madsen
Phys. Rev. E **74**, 031706 (2006)

[192] Structural rearrangements during the initial growth stages of organic thin films of F16CuPc on SiO₂

D.G. de Oteyza, E. Barrera, S. Sellner, J.O. Ossó, H. Dosch
Journal of Physical Chemistry B **110**, 16618 (2006)

[191] Fine structure effects and phase transition of Xe nanocrystals in Si

G. Faraci, A.R. Pennisi and F. Zontone
Eur. Phys. J. B **51**, 209 (2006)

[190] Expansion and Melting of Xe Nanocrystals in Si

G. Faraci, A. R. Pennisi, F. Zontone, B. Li and I. Petrof
Phys. Rev. B **74**, 235436 (2006)

[189] Charge distribution consequences of the magnetic order in TbB6

R. M. Galéra, M. Amara, I. Aviani, F. Givord, F. Zontone, S. Kunii
Physica Status Solidi (c) **3**, 3184 (2006)

[188] The semi-transparent diamond monochromator at the ESRF Troika beamlines

M. Mattenet, O. Konovalov, A. Madsen, G. Grübel
Macromolecular Research **14**, 473 (2006)

[187] Magnetic depth profiles from resonant soft X-ray scattering: Application to Dy thin films

H. Ott, C. Schüssler-Langeheine, E. Schierle, G. Kaindl, E. Weschke
Appl. Phys. Lett. **88**, 212507 (2006)

[186] Microradian x-ray diffraction in colloidal photonic crystals

A. V. Petukhov, J. H. J. Thijssen, D. C. 't Hart, A. Imhof, A. van Blaaderen, I. P. Dolbnya, A. Snigirev, A. Moussaïd, and I. Snigireva
J. Appl. Cryst. **39**, 137 (2006)

[185] Coarsening dynamics in elastically anisotropic alloys

B. Pfau, L.-M. Stadler, B. Sepiol, R. Weinkamer, J. W. Kantelhardt, F. Zontone, and G. Vogl
Phys. Rev. B **73**, 180101(R) (2006)

[184] Disorder effects on the charge-density waves structure in V- and W-doped blue bronzes: Friedel oscillations and charge-density wave pinning

S. Ravy, S. Rouzière, J.P. Pouget, S. Brazovskii, J. Marcus J, J.F. Béjar J.F, E. Elkaim
Phys. Rev. B **74**, 174102 (2006)

[183] Probing dynamics at interfaces: Options for neutron and X-ray spectroscopy

M. C. Rheinstädter, T. Seydel, B. Farago, T. Salditt
Journal of Neutron Research **14**, 257 (2006)

[182] Glassy dynamics and aging in a dense ferrofluid

A. Robert, E. Wandersman, E. Dubois, V. Dupuis and R. Perzynski
Europhys. Lett. **75**, 764 (2006)

[181] Detrended fluctuation analysis in X-ray photon correlation spectroscopy for determining coarsening dynamics in alloys

L. M. Stadler, B. Sepiol, B. Pfau, J. W. Kantelhardt, R. Weinkamer, G. Vogl
Phys. Rev. E **74**, 041107 (2006)

[180] Kinetic arrest and glass-glass transition in short-ranged attractive colloids

M. Sztucki, T. Narayanan, G. Belina, A. Moussaïd, F. Pignon and H. Hoekstra
Phys. Rev. E **74**, 051504 (2006)

[179] Characterization of photonic colloidal single crystals by microradian x-ray diffraction

J. H. J. Thijssen, A. V. Petukhov, D. C. 't Hart, A. Imhof, C. H. M. van der Werf, R. E. I. Schropp and A. van Blaaderen

Advanced Materials **18**, 1662 (2006)

[178] Structure and dynamics of charged magnetic colloids

J. Wagner, B. Fischer, T. Autenrieth, R. Hempelmann

J. Phys. Condens. Matter **18**, S2697 (2006)

2005

[177] Switching effects and sliding-induced charge transfer between the coexisting Q1 and Q2 charge density waves in NbSe₃

A. Ayari, R. Danneau, H. Requardt, L. Ortega, J. E. Lorenzo, P. Monceau, R. Currat, S. Brazovskii, G. Grübel

J. Phys. IV **131**, 125 (2005)

[176] Determination of nanocrystal sizes: A comparison of TEM, SAXS and XRD studies of highly monodisperse CoPt₃ particles

H. Borchert, E.V. Shevchenko, A. Robert, I. Mekis, A. Kornowski, G. Grübel and H. Weller

Langmuir **21**, 1931 (2005)

[175] Coherent X-ray scattering and speckle pattern of solid-supported multilayers of surfactant bilayers

G. Brotons, D. Constantin, A. Madsen and T. Salditt

Physica B **357**, 61 (2005)

[174] Heterodyne and homodyne detection in fluctuating smectic membranes by photon correlation spectroscopy with x-ray and visible light

W. H. de Jeu, A. Madsen, I. Sikharulidze and S. Sprunt

Physica B **357**, 39 (2005)

[173] Diffusion and microstructural properties of solutions of charged nanosized proteins: Experiment versus theory

J. Gapinski, A. Wilk, A. Patkowski, W. Häussler, A. J. Banchio, R. Pecora, and G. Nägele

J. Chem. Phys. **123**, 054708 (2005)

[172] Refractive X-ray Lenses

B. Lengeler, C.G. Schroer, M. Kuhlmann, B. Benner, T.F. Günzler, O. Kurapova, F. Zontone, A. Snigirev and I. Snigireva.

J. Phys. D: Appl. Phys. **38**, A218 (2005)

[171] X-ray Intensity Fluctuation Spectroscopy Studies of Ordering Kinetics in a Cu-Pd Alloy

K. F. Ludwig, F. Livet, F. Bley, J-P. Simon, R. Caudron, D. Le Bolloc'h, A. Moussaïd

Phys. Rev. B **72**, 144201 (2005)

[170] Grazing incidence scattering of coherent X-rays from a liquid surface

A. Madsen, T. Seydel, M. Tolan and G. Grübel

J. Sync. Rad. **12**, 786 (2005)

[169] Microrheology Polymeric Solutions using X-ray Photon Correlation Spectroscopy

A. Papagiannopoulos, T. A. Waigh, A. Fluerasu, C. Fernyhough and A. Madsen

J. Phys.: Condens. Matter **17**, L279 (2005)

[168] Experimental Comparison of Pixel Detector Arrays and CCD-based Systems for X-ray Area Detection on Synchrotron Beamlines

C. Ponchut, F. Zontone and H. Graafsma
IEEE Transactions on Nuclear Science, vol.52(5), 1760-1765 (2005)

[167] Structure and Dynamics of electrostatically interacting magnetic nanoparticles in suspension

A. Robert, J. Wagner, T. Autenrieth, W. Härtl and G. Grübel
J. Chem. Phys. **122**, 084701 (2005)

[166] Structure and dynamics of complex liquids with magnetic dipole-dipole interactions by means of static and dynamic X-ray scattering

A. Robert, J. Wagner, T. Autenrieth, W. Härtl and G. Grübel
J. Magn. Magn. Mater. **289**, 47 (2005)

[165] Coherent X-rays as a new probe for the investigations of the dynamics of opaque colloidal suspensions

A. Robert, J. Wagner, T. Autenrieth, W. Härtl and G. Grübel
J. Magn. Magn. Mater. **289**, 54 (2005)

[164] Real-time characterization of intermediates in the pathway to open complex formation by Escherichia coli RNA polymerase at the T7A1 promoter

B. Sclavi, E. Zaychikov, A. Rogozina, F. Walther, M. Buckle and H. Heumann
Proc. Natl. Acad. Sci. USA **102**, 4706 (2005)

[163] Dynamics of fluctuations in smectic membranes

I. Sikharulidze and W. H. de Jeu
Phys. Rev. E **72**, 011704 (2005)

[162] X-ray photon correlation spectroscopy in a reflection geometry: coherence and resolution

I. Sikharulidze, I. P. Dolbnya, A. Madsen and W. H. de Jeu
Optics Communications **247**, 111 (2005)

[161] Investigating Slow Dynamics in Alloys using X-ray Photon Correlation Spectroscopy

L.-M. Stadler, B. Sepiol, B. Pfau, M. Hartmann, G. Vogl and F. Zontone
Nucl. Instrum. and Meth. B **238**, 189-191(2005)

[160] Structure and dynamics of complex liquids with magnetic dipole-dipole interactions by means of static and dynamic X-ray scattering

J. Wagner, T. Autenrieth, A. Robert, W. Härtl, G. Grübel
J. Magn. Magn. Mater. **289**, 54 (2005)

[159] Resonant magnetic X-ray scattering at the lanthanide M_5 edges

E. Weschke, H. Ott, E. Schierle, C. Schüssler-Langeheine, G. Kaindl, V. Leiner, H. Zabel
Physica B **357**, 16 (2005)

2004

[158] Cobalt ferrite silica core shell colloids: A magnetic Yukawa system

T. Autenrieth, J. Wagner, R. Hempelmann, W. Härtl, A. Robert and G. Grübel
Appl. Organometal. Chem. **18**, 520 (2004)

[157] Sliding-induced decoupling and charge transfer between the coexisting Q_1 and Q_2 charge density waves in $NbSe_3$

A. Ayari, R. Danneau, H. Requardt, L. Ortega, J. E. Lorenzo, P. Monceau, R. Currat, S. Brazovskii and G. Grübel
Phys. Rev. Lett. **93**, 106404 (2004)

[156] Micro-transitions or breathers in L-alanine?

M. Barthes, H.N. Bordallo, F. Denoyer, J.E. Lorenzo, J. Zaccaro, A. Robert and F. Zontone
Eur. Phys. J. E **37**, 375 (2004)

[155] Influence of functional organic groups on the structure of CTAB templated organosilica thin films

A. Gibaud, J.F. Bardeau, M. Dutreilh-Colas, M. Bellour, V.V. Balasubramanian, A. Robert, A. Mehdi, C. Reye, R.J. Corriu
J. Mat. Chem. **14**, 1854 (2004)

[154] Correlation Spectroscopy with Coherent X-rays

G. Grübel and F. Zontone,
J. of Alloys and Compounds **362**, 3 (2004)

[153] Beryllium parabolic refractive X-ray lenses

B. Lengeler, C.G. Schroer, M. Kuhlmann, B. Benner, T.F. Gunzler, O. Kurapova, F. Zontone, A. Snigirev and I. Snigireva
Proc. SPIE Int. Soc. Opt. Eng. **5539**, 1 (2004)

[152] Capillary waves at the transition from propagating to over-damped behavior

A. Madsen, T. Seydel, M. Sprung, C. Gutt, M. Tolan and G. Grübel
Phys. Rev. Lett. **92**, 096104 (2004)

[151] The "Pile-up Effect" in Photon Detection

A. Madsen, J. Als-Nielsen, F. Zontone and G. Grübel
Proceedings of the 8th International Conference on Synchrotron Radiation Instrumentation, San Francisco, California, August 25-29, 2003.
AIP Conference Proceedings **705**, p. 993-996 (2004)

[150] Focusing hard X-ray FEL beams with parabolic refractive lenses

C. G. Schroer, B. Benner, M. Kuhlmann, O. Kurapova, B. Lengeler, F. Zontone, A. Snigirev, I. Snigireva, H. Schulte-Schrepping
Proc. SPIE **5534**, 116 (2004)

[149] Surface roughness of supercooled polymer melts

M. Sprung, T. Seydel, C. Gutt, R. Weber, E. DiMasi, A. Madsen and M. Tolan
Phys. Rev. E **70**, 051809 (2004)

[148] Revealing antiphase-domain dynamics in alloys by combining advanced statistical techniques with x-ray photon correlation spectroscopy

L.-M. Stadler, B. Sepiol, J. W. Kantelhardt, I. Zizak, G. Grübel and G. Vogl
Phys. Rev. B **69**, 224301 (2004)

[147] Small-angle scattering from spherical core-shell particles: An analytical scattering function for particles with Schulz-Flory size distribution

J. Wagner

J. Appl. Cryst. **37**, 750 (2004)

[146] Thermo-mechanical analysis and design optimization of front-end compound refractive lens

L. Zhang, A. Snigirev, I. Snigireva, G. Naylor, A. Madsen, F. Zontone, M. Di Michiel and P. Elleaume

Proc. SPIE Int. Soc. Opt. Eng. **5539**, 48 (2004)

2003

[145] A reply to the Comment by R. Thorne, J.D. Brock, M. Sutton

R. Danneau, A. Ayari, D. Rideau, H. Requardt, J.E. Lorenzo, L. Ortega, P. Monceau, R. Currat, G. Grübel

Phys. Rev. Lett. **91** (2003) 049704

[144] Observation of heterodyne mixing in surface XPCS experiments

C. Gutt, T. Ghaderi, V. Chamard, A. Madsen, T. Seydel, M. Tolan, M. Sprung, G. Grübel, S.K. Sinha

Phys. Rev. Lett. **91**, 076104 (2003)

[143] Ultra small-angle X-ray scattering: conditions, limits and results in speckle experiments

F. Livet, F. Bley, F. Ehrburger-Dolle, E. Geissler, D. LeBolloc'h and T. Schulli

J. Appl. Cryst. **36**, 774 (2003)

[142] Viscosity of a liquid crystal near the Nematic-SmecticA phase transition.

A. Madsen, J. Als-Nielsen and G. Grübel.

Phys. Rev. Lett. **90**, 085701 (2003)

[141] Structure and dynamics of a free liquid crystal surface at the N-to-SmA phase transition.

A. Madsen, B. Struth and G. Grübel

Physica B **336**, 216 (2003)

[140] Deviation from the Virtual Crystal Approximation in Disordered Au-Cu Alloy Nanocrystals: EXAFS and GIXRD Investigation

C. Maurizio, G. Mattei, P. Mazzoldi, S. Padovani, E. Cattaruzza, F. Gonella, F. D'Acapito, F. Zontone

Nucl. Instrum. and Meth. B **200**, 178 (2003)

[139] Evaluation of Medipix-1 in X-ray Scattering and X-ray Diffraction Applications

C. Ponchut and F. Zontone,

Nucl. Instrum. and Meth. A **510**, 29 (2003)

[138] Ultra-small-angle X-ray scattering studies of attractive colloidal glass transition

D. Pontoni and T. Narayanan

J. Appl. Cryst. **36**, 787 (2003)

[137] Interactions and kinetic arrest in an adhesive hard-sphere colloidal system

D. Pontoni, S. Finet, T. Narayanan, A. R. Rennie

J. Chem. Phys. **119**, 6157 (2003)

[136] Microstructure and Dynamics near an Attractive Colloidal Glass transition

D. Pontoni, T. Narayanan, J.-M. Petit, G. Grübel and D. Beysens
Phys. Rev. Lett. **90**, 188301 (2003)

[135] A setup for in-situ surface investigations of the liquid/glass transition with X-rays

T. Seydel, A. Madsen, M. Sprung, M. Tolan, G. Grübel and W. Press
Rev. Sci. Instr. **74**, 4033 (2003)

[134] Surface and Bulk-elasticity determined fluctuation regimes in smectic membranes

I. Sikharulidze, B. Farago, I.P. Dolbnya, A. Madsen and W.H. de Jeu
Phys. Rev. Lett. **91**, 165504 (2003)

[133] Diffusion Studies in Ordered Alloys

M. Sladeczek, M. Kaisermayr, B. Sepiol, L. Stadler, G. Vogl, G. Grübel and R. Ruffer
in "Material Research in Atomic Scale by Mössbauer Spectroscopy", 229 (Kluwer Academic, 2003)

[132] Long-term correlations distinguish coarsening mechanisms in alloys

L.-M. Stadler, B. Sepiol, R. Weinkamer, M. Hartmann, P. Fratzl, J. W. Kantelhardt, F. Zontone, G. Grübel and G. Vogl
Phys. Rev. B **68**, 180101(R) (2003)

[131] Photon Correlation Spectroscopy with High Energy Coherent X-Rays

T. Thurn-Albrecht, F. Zontone, G. Grübel, W. Steffen, P. Müller-Buschbaum and A. Patkowski
Phys. Rev. E **68**, 031407 (2003)

2002

[130] Sequential Ion Implantation of Copper and Cobalt in Silica Glass: a Study by Synchrotron Radiation Techniques

E. Cattaruzza, F. D'Acapito, C. de Julian Fernandez, A. de Lorenzi, F. Gonella, G. Mattei, C. Maurizio, P. Mazzoldi, S. Padovani, B.F. Scremin, F. Zontone
Nucl. Instrum. and Meth. B **191**, 406 (2002)

[129] Motional ordering of a charge-density wave in the sliding state

R. Danneau, A. Ayari, D. Rideau, H. Requardt, J.E. Lorenzo, L. Ortega, P. Monceau, R. Currat, and G. Grübel
Phys. Rev. Lett. **89**, 106404 (2002)

[128] Increase of the charge density wave phase coherence in the sliding and the mode-locked state

R. Danneau, A. Ayari, D. Rideau, H. Requardt, J. E. Lorenzo, L. Ortega, P. Monceau, R. Currat, G. Grübel
J. Phys. IV **12**, Pr9-177 (2002)

[127] Dislocation strain field in ultrathin bonded silicon wafers studied by grazing incidence X-ray diffraction

J. Eymery, D. Buttard, F. Fournel, H. Moriceau, G.T. Baumbach and D. Luebbert
Phys. Rev. B **65**, 165337 (2002)

[126] Probing Diffusion in the time domain

G. Grübel and G. Vogl
Synchrotron Radiation News **15**,14 (2002)

[125] Crossover between strong- and weak-field critical adsorption and the determination of the universal exponent

B. Nickel, F. Schlesener, W. Donner, H. Dosch and C. Detlefs
J. Chem. Phys. **117**, 902 (2002)

[124] X-ray diffraction study of the transient structure of sliding charge density waves in NbSe₃

H. Requardt, D. Rideau, R. Danneau, A. Ayari, F. Y. Nad, J. E. Lorenzo, P. Monceau, R. Currat, C. Detlefs, D. Smilgies, G. Grübel
J. Phys. IV **12**, Pr9-181 (2002)

[123] Smectic membranes in motion: Approaching the fast limits of X-ray Photon Correlation Spectroscopy

I. Sikharulidze, I. P. Dolbnya, A. Fera, A. Madsen, B. I Ostrovskii and W. H. de Jeu
Phys. Rev. Lett. **88**, 115503 (2002)

[122] Orthorhombic versus monoclinic symmetry of the charge-ordered state of NaV₂O₅

S. van Smaalen, P. Daniels, L. Palatinus, R. K. Kremer
Phys. Rev. B **65**, 060101 (2002)

[121] Organization of 2-Dimensional Phospholipid Monolayers on a Gel-Forming Substrate

B. Struth, F. Rieutord, O. Konovalov, G. Brezesinski, G. Grübel, P. Terech
Phys. Rev. Lett. **88**, 25502 (2002)

2001

[120] Propagation of coherent X-rays in a multistep-index X-ray waveguide

J.H.H. Bongaerts, M.J. Zwanenburg, F. Zontone and J.F. van der Veen
J. Appl. Phys. **90**, 94 (2001)

[119] Crystalline smectic-B films as fluctuating systems: Static and dynamic X-ray scattering

A. Fera A., I. P. Dolbnya, R. Opitz, B. I. Ostrovskii, W. H. de Jeu
Phys. Rev. E **63**, 020601 (2001)

[118] Double Implantation in Silica Glass for Metal Cluster Composite Formation: a Study by Synchrotron Radiation Techniques

F. Gonella, E. Cattaruzza, G. Battaglin, F. D'Acapito, C. Sada, P. Mazzoldi, C. Maurizio, G. Mattei, A. Martorana, A. Longo, F. Zontone
J. of Non-Crystalline Solids **280**, 241 (2001)

[117] Dynamics and correlations in magnetic colloidal systems studied by X-ray photon correlation spectroscopy

J. Lal, D.L. Abernathy, L. Auvray, O. Diat and G. Grübel
Eur. Phys. J. E **4**, 263 (2001)

[116] Kinetic Evolution of unmixing in an AlLi alloy using XIFS

F. Livet, F. Bley, R. Caudron, E. Geissler, D. L. Abernathy, C. Detlefs, G. Grübel and M. Sutton
Phys. Rev. E **63**, 036108 (2001)

[115] Surface ordering in a concentrated suspension of colloidal particles investigated by X-ray scattering methods

A. Madsen, O. Konovalov, A. Robert and G. Grübel
Phys. Rev. E **64**, 061406 (2001)

[114] The thermal focusing mirror of the ESRF Troika beam line: Principle, design and first results

M. Mattenet, D.L. Abernathy, F. Zontone, C. Detlefs, G. Grübel, M. Facchini and P. Jacquot
Nucl. Instr. Met. **467**, 305 (2001)

[113] Structure and thermal fluctuations in thin films of smectic liquid crystals

B. I. Ostrovskii and W. H. de Jeu
Crystallogr. Rep. **46**, 680-686 (2001)

[112] High Resolution X-Ray Scattering techniques for studying the sliding CDW distortions in NbSe₃

D. Rideau, P. Monceau, R. Currat, H. Requardt, F. Nad, J.E. Lorenzo, S. Brazovskii, C. Detlefs and G. Grübel
Nucl. Instr. Meth. A **467-468**, 1010 (2001)

[111] X-ray scattering evidence for macroscopic strong pinning centers in the sliding CDW state of NbSe₃

D. Rideau, P. Monceau, R. Currat, H. Requardt, F. Nad, J.E. Lorenzo, S. Brazovskii, C. Detlefs and G. Grübel
Europhys. Lett. **56**, 289 (2001)

[110] Resonant magnetic x-ray scattering from ultrathin Ho-metal films down to a few atomic layers

C. Schüssler-Langeheine, E. Weschke, A.Y. Grigoriev, H. Ott, R. Meier, D.V. Vyalikh, C. Sutter, D. Abernathy, G. Grübel and G. Kaindl
Journal of Electron Spectroscopy and Related Phenomena **114-116**, 953 (2001)

[109] Magnetic effects in the band structure of ferromagnetic and antiferromagnetic lanthanide-metal films

C. Schuessler-Langeheine, E. Weschke, H. Ott, A. Y. Grigoriev, A. Moeller, R. Meier, C. Mazumdar, G. Kaindl
J. Electron Spectrosc. Relat. Phenom. **114-116**, 795 (2001)

[108] Capillary waves in slow motion

T. Seydel, A. Madsen, M. Tolan, G. Grübel and W. Press
Phys. Rev. B **63**, 073409 (2001)

[107] X-ray magnetic-scattering study of magnetism in hydrogenated thin holmium films

C. Sutter, D. Laberge, A. Remhof, H. Zabel, C. Detlefs and G. Grübel
Europhys. Lett. **53**, 257 (2001)

[106] Investigation of surface dynamics on micro- and nanometer scales

M. Tolan, T. Seydel, A. Madsen, G. Grübel, W. Press and S. K. Sinha
Applied Surface Science **182**, 236 (2001)

[105] Magnetic exchange splitting in lanthanide metals

E. Weschke and G. Kaindl
J. Phys. Cond. Mat. **13**, 11133 (2001)

[104] Evidence for a Compressed Fluid Phase of Xe Clusters

F. Zontone, F. d'Acapito, G. Faraci and A. R. Pennisi
Eur. Phys. J. B **19**, 501 (2001)

2000

[103] Thermodynamics and X-ray studies of 2-alcohol monolayers: Two-dimensional phase diagrams

C. Alonso, F. Artzner, J. Lajzerowicz, G. Grübel, N. Boudet, F. Rieutord, J.M. Petit and A. Renault
Eur. Phys. J. E **3**, 63 (2000)

[102] Plastic sliding of charge density waves: X-ray space resolved-studies versus theory of current conversion

S. Barzovskii, N. Kirova, H. Requardt, F.Y. Nad, P. Monceau, R. Currat, J.E. Lorenzo, G. Grübel and C. Vettier
Phys. Rev. B **61**, 10640 (2000)

[101] Complex dynamic Behavior of Fluctuating Smectic-A Films as Studied by Scattering with Coherent X-rays

A. Fera, I.P. Dolbnya, G. Grübel, H.G. Muller, B.I. Ostrovskii A. N. Shalaginov and W. H. de Jeu.
Phys. Rev. Lett. **85**, 2316 (2000)

[100] Nanometric patterning with ultrathin twist bonded silicon wafers

F. Fournel, H. Moriceau, N. Magnea, J. Eymery, D. Buttard, J.L. Rouviere, K. Rousseau, B. Aspar
Thin Solid Films **380**, 10 (2000)

[99] Aging in a filled polymer: Coherent small angle X-ray and light scattering

E. Geissler, A.M. Hecht, C. Rochas, F. Bley, F. Livet and M. Sutton
Phys. Rev. E **62**, 8308 (2000)

[98] Dynamics of dense, charge-stabilized suspensions of colloidal silica studied by correlation spectroscopy with coherent X-rays

G. Grübel, D.L. Abernathy, D.O. Riese, W.L. Vos and G.H. Wegdam
J. Appl. Crystallogr. **33**, 424 (2000)

[97] X-Ray Photon Correlation Spectroscopy

G. Grübel

in "Dynamik in kondensierter Materie": vom 13. bis 24. März 2000 im Forschungszentrum Jülich / Hrsg.: Institut für Festkörperforschung der Forschungszentrum Jülich GmbH. Zsstellung: Rainer Hölzle.-Jülich: Forschungszentrum, Zentralbibliothek 2000

[96] Scattering with coherent x-ray beams

G. Grübel, D.L. Abernathy and C. Detlefs

Proceedings of the HERCULES X EUROCONFERENCE, Grenoble, April 6-9 (2000)

[95] Measurement and control of the bending of x-ray mirrors using speckle interferometry

P. Jacquot, M. Facchini, M. Mattenet and G. Grübel

in "Laser Interferometry X: Applications, Gordon M. Brown, Wener P.O. Jüptner, Ryszard J. Pryputniewicz, editors, Proceedings SPIE, Vol. 4101 (2000) 360

[94] Investigation of beta-SiC precipitation in Si_{1-y}Cy epilayers by X-ray scattering at grazing incidence

Z. Kovats, T.H. Metzger, J. Peisl, J. Stangl, M. Muehlberger, Y. Zhuang, F. Schaeffler, G. Bauer
Appl. Phys. Lett. **76**, 3409 (2000)

[93] Synchrotron radiation diffraction from 2D protein crystals at the air/water interface

P.F. Lenne, B. Berge, A. Renault, C. Zakri, C. Venien-Bryan, S. Courty, F. Balavoine, W. Bergsma-Schutter, A. Brisson, G. Grubel, N. Boudet, O. Konovalov and J.F. Legrand
Biophysical Journal **79**, 496 (2000)

[92] Using direct illumination CCDs as high-resolution area detectors for X-ray scattering
F. Livet, F. Blay, J. Mainville, R. Caudron, S.G.J. Mochrie, E. Geissler, G. Dolino, D. Abernathy, G. Grübel and M. Sutton
Nucl. Instr. Meth., **A451**, 596-609 (2000)

[91] Critical adsorption and dimensional crossover in epitaxial FeCo films
B. Nickel, W. Donner, H. Dosch, C. Detlefs and G. Grübel
Phys. Rev. Lett. **85**, 134 (2000)

[90] Phase slippage at the interface: normalmetal/sliding charge-density wave
D. Rideau, P. Monceau, H. Requardt, R. Currat, F. Nad, J.E. Lorenzo, S. Brazovskii, N. Kirova, D. Smilgies and G. Grübel
Physica B **280**, 317-322 (2000)

[89] Effective screening of hydrodynamic interactions in charged colloidal suspensions
D.O. Riese, G.H. Wegdam, W.L. Vos, R. Sprik, D. Fenistein, J.H.H. Bongaerts and G. Grübel
Phys. Rev. Lett. **85**, 5460 (2000)

[88] Photon correlation spectroscopy: X-rays versus visible light
D.O. Riese, W.L. Vos, G.H. Wegdam, F.J. Poelwijk, D. L. Abernathy and G. Grübel
Phys. Rev. E **61**, 1676 (2000)

[87] Magnetic splitting of valence states in ferro- and antiferromagnetic lanthanide metals
C. Schuessler-Langeheine, E. Weschke, C. Mazumdar, R. Meier, A.Y. Grigoriev, G. Kaindl, C. Sutter, D.L. Abernathy, G. Grubel and M. Richter
Phys. Rev. Lett. **84**, 5624 (2000)

[86] Low-resolution phase information in multiple-wavelength anomalous solvent contrast variation experiments
W. Shepard, R. Kahn, M. Ramin and R. Fourme
Acta. Cryst. D **56**, 1288 (2000)

[85] X-ray waveguiding studies of ordering phenomena in confined fluids
M.J. Zwanenburg, J.H.H. Bongaerts, J.F. Peters, D.O. Riese, J.F. van der Veen
Phys. Rev. Lett. **85**, 5154 (2000)

[84] Focusing of coherent X-rays in a tapered planar waveguide
M.J. Zwanenburg, J.H.H. Bongaerts, J.F. Peters, D.O. Riese, J.F. van der Veen
Physica B **283**, 285 (2000)

[83] A planar X-ray waveguide with a tunable air gap for the investigation of confined fluids
M.J. Zwanenburg, J.F. van der Veen, H.G. Ficke and H. Neerings
Rev. Sci. Instr. **71**, 1723 (2000)

1999

[82] The magnetic structure of orthorhombic ErNi₂B₂C
C. Detlefs, D.L. Abernathy, G. Grübel, and P.C. Canfield
Europhys. Lett. **47**, 352 (1999)

- [81] Caracterisation des deformations d'un miroir a rayons X thermiquement adaptif: Resultats obtenus par interferometrie speckle**
P. Jacquot, M. Facchini, M. Mattenet et G. Grübel
in *Colloque "Nouveaux Moyens Optiques pour L'Industrie II"*, Societe Francaise d'Optique, Novembre 17-19 (1999), Mittelwihr, France
- [80] Observation of a Kosterlitz-Thouless state at the spin-Peierls phase transition in CuGeO₃**
J. E. Lorenzo, L. P. Regnault, S. Langridge, C. Vettier, C. Sutter, G. Grübel, J. Souletie, J. G. Lussier, J. P. Schoeffel, J. P. Pouget, A. Stunault, D. Wermeille, G. Dhalenne, A. Revcolevschi
Europhys. Lett. **45**, 45 (1999)
- [79] Multiwavelength anomalous solvent contrast (MASC): Derivation of envelope structure-factor amplitudes and comparison with model values**
M. Ramin, W. Shepard, R. Fourme and R. Kahn
Acta Cryst. D **55**, 157 (1999)
- [78] Space- and time-resolved X-ray diffraction from pinned and sliding charge-density-waves in NbSe₃**
H. Requardt, F. Y. Nad, P. Monceau, R. Currat, J. E. Lorenzo, D. Rideau, D. Smilgies, G. Grübel
J. Phys. IV **9**, 133 (1999)
- [77] Current conversion in the sliding charge density wave state of NbSe₃**
H. Requardt, F. Y. Nad, P. Monceau, R. Currat, J. E. Lorenzo, G. Grübel, C. Vettier C.
Synth. Met. **103**, 2586 (1999)
- [76] Coherent X-Ray Diffraction Imaging of Silicon Oxide Growth**
I.K. Robinson, J.L. Libbert, I.A. Vartanyants, J.A. Pitney, D.M. Smilgies, D.L. Abernathy, G. Grübel
Phys. Rev. B **60**, 9965 (1999)
- [75] Structure and Dynamics of Surfactant Stabilized Aggregates of Palladium Nanoparticles under Dilute and Semidilute Conditions - A Study Using Static and Dynamic X-ray Scattering**
T. Thurn-Albrecht, G. Meier, P. Müller-Buschbaum, A. Patkowski, W. Steffen, G. Grübel, D.L. Abernathy, O. Diat, M. Winter, M.G. Koch, M.T. Reetz
Phys. Rev. E **59**, 642 (1999)
- [74] Melting and freezing at surfaces**
J. F. van der Veen
Surf. Sci. **433-435**, 1-11 (1999)
- [73] Layering at the solid-liquid interface**
J. F. van der Veen, M. J. Zwanenburg, W. J. Huisman
Sync. Rad. News **12**, 47 (1999)
- [72] Growth Studies of Hetero-Epitaxial Thin Films with X-Rays**
E. Weschke, C. Schüssler-Langeheine, R. Meier, G. Kaindl, C. Sutter and G. Grübel
Advances in Solid State Physics **39** (1999) 541-550, B. Kramer (ed.), Vieweg, Braunschweig
- [71] Coherent propagation of X rays in planar waveguide with a tunable air gap**
M.J. Zwanenburg, J.F. Peters, J.H.H. Bongaerts, S.A. de Vries, D.L. Abernathy, J.F. van der Veen
Phys. Rev. Lett. **82**, 1696 (1999)

1998

[70] Small-angle x-ray scattering using coherent undulator radiation at the ESRF

D.L. Abernathy, G. Grübel, S. Brauer, I. McNulty, G.B. Stephenson, S.G.J. Mochrie, A.R. Sandy, N. Mulders and M. Sutton
J. Sync. Rad. **5**, 37 (1998)

[69] Structural characterization of self-assembled Ge dot multilayers by x-ray diffraction and reflectivity methods

A.A. Darhuber, V. Holy, P. Schittenhelm, J. Stangl, I. Kegel, Z. Kovats, T.H. Metzger, G. Bauer, G. Abstreiter and G. Grübel
Physica E **2**, 789 (1998)

[68] Small Angle X-Ray Scattering from Dynamical Processes

O. Diat, T. Narayanan, D.L. Abernathy and G. Grübel
Current Opinion in Colloid and Interface Science **3/3**, 305 (1998)

[67] Strain relaxation of boron nitride thin films on silicon

W. Donner, H. Dosch, S. Ulrich, H. Ehrhardt and D.L. Abernathy
Appl. Phys. Lett. **73**, 777 (1998)

[66] Investigating liquid surfaces down to the nanometer scale using grazing incidence x-ray scattering

C. Fradin, A. Braslau, D. Luzet, M. Alba, C. Gourier, J. Daillant, G. Grübel, G. Vignaud, J.F. Legrand, J. Lal, J.M. Petit and F. Rieutord
Physica B **248**, 310 (1998)

[65] Korrelationspektroskopie mit kohärenter Röntgenstrahlung

G. Grübel
Physikalische Blätter **11**, 1036 (1998)

[64] Correlation Spectroscopy with Coherent X-Rays: A new probe for the study of slow dynamics

G. Grübel, A. Robert and D.L. Abernathy
"Slow Dynamics in Complex Systems", Eighth Tohwa University International Symposium, Fukuoka, Japan, November 9-14, 1998, M. Tokuyama, I. Oppenheim (eds.), AIP Conference Proceedings 469

[63] Modelling the atomic density across a solid-liquid interface

W. J. Huisman, J. F. van der Veen
Surf. Sci. **402-404**, 866 (1998)

[62] Observation of a Kosterlitz-Thouless state at the spin-Peierls phase transition in CuGeO₃

J.E. Lorenzo, L.P. Regnault, S. Langridge, C. Vettier, C. Sutter, G. Grübel, J. Souletie, J.G. Lussier, J.P. Schoeffel, J.P. Pouget, A. Stunault, D. Wermeille, G. Dhalenne and A. Revcolevschi
Europhys. Lett. **45**, 45 (1998)

[61] The Multi-Crystal Monochromators of the TROIKA Beamline at ESRF

M. Mattenet, T. Schneider and G. Grübel,
J. Sync. Rad. **5**, 651 (1998)

[60] Shape, size, strain and correlations in quantum dot systems studied by grazing incidence X-ray scattering methods

Metzger T.H., Kegel I., Paniago R., Lorke A., Peisl J., Schulze J., Eisele I., Schittenhelm P., Abstreiter G.
Thin Solid Films **336**, 1-8 (1998)

[59] A direct observation of CDW current conversion by spatially-resolved synchrotron x-ray studies in NbSe₃

H. Requardt, F. Ya. Nad, P. Monceau, R. Currat, J.E. Lorenzo, S. Brazovskii, N. Kirova, G. Grübel, and C. Vettier

Phys. Rev. Lett. **80**, 5631 (1998)

[58] X-Ray reflectivity analysis of non-gaussian surfaces

G. Vignaud, A. Gibaud, F. Paris, D. Auserre and G. Grübel

Thin Solid Films **323**, 1 (1998)

[57] Ordering of diblock PS-PBMA thin films: an X-Ray reflectivity study

G. Vignaud, A. Gibaud, G. Grübel, S. Joly, D. Auserre, J.F. Legrand and Y. Gallot

Physica B **248**, 250 (1998)

[56] Comparison between macroscopic and microscopic measurements of the shear elastic constant of alcohol monolayers at the air-water interface

C. Zakri, A. Renault, B. Berge

Physica B **248**, 208-210 (1998)

1997

[55] Bending energy of amphiphilic films at the nanometer scale

C. Gourier, J. Dailant, A. Braslau, D. Luzet, M. Alba, C. Blot, D. Chatenay, G. Grübel, J.F. Legrand and G. Vignaud

Phys. Rev. Lett. **78**, 3157 (1997)

[54] Diffraction and Correlation Spectroscopy with Coherent X-Rays

G. Grübel and D.L. Abernathy

SPIE Proceedings, 3154, 103 (1997)

[53] Layering of a liquid metal in contact with a hard wall

W.J. Huisman, J.F. Peters, M.J. Zwanenburg, S.A de Vries, T.E. Derry, D.L. Abernathy and J.F. van der Veen

Nature **390**, 379 (1997)

[52] A new x-ray diffraction method for structural investigations of solid-liquid interfaces

W. J. Huisman, J. F. Peters, J. W. Derks, H. G. Ficke, D. L. Abernathy, J. F. van der Veen

Rev. Sci. Instr. **68**, 4169 (1997)

[51] Surface Segregation-Induced Critical Phenomena at FeCo(001) Surfaces

S. Krimmel, W. Donner, B. Nickel, H. Dosch, C. Sutter, and G. Grübel

Phys. Rev. Lett. **78**, 3880 (1997)

[50] Studies of magnetism with synchrotron x-rays

G. H. Lander

J. Alloys comp. **250**, 544-551 (1997)

[49] Separation of the spin and orbital moments in antiferromagnetic UAs

[S. Langridge](#), [G. H. Lander](#), [N. Bernhoeft](#), [A. Stunault](#), [C. Vettier](#), [G. Grübel](#), [C. Sutter](#), [F. de Bergevin](#), [W. J. Nuttall](#), [W. G. Stirling](#), [K. Mattenberger](#) and [O. Vogt](#)
Phys. Rev. B **55**, 6392 (1997)

[48] Speckle Structure in Small-Angle Coherent X-ray Scattering

J. Mainville, F. Bley, F. Livet, E. Geissler, J.F. Legrand, D. Abernathy, G. Grübel, S.G.J. Mochrie and M. Sutton
J. Appl. Cryst. **30**, 828 (1997)

[47] Dynamics of Block Copolymer Micelles Revealed by X-ray Intensity Fluctuation Spectroscopy

S.G.J. Mochrie, A.M. Mayes, A.R. Sandy, M. Sutton, S. Brauer, G.B. Stephenson, D.L. Abernathy and G. Grübel
Phys. Rev. Lett. **78**, 1275 (1997)

[46] The characterization of SiGe/Si multilayers via an unambiguous solution of the inverse problem in X-ray Bragg diffraction

A. Y. Nikulin, P. Zaumseil, P. V. Petrashen
J. Phys. D **30**, 2373 (1997)

[45] Helicity of magnetic domains in holmium studied with circularly polarized x-rays

C. Sutter, G. Grübel, C. Vettier, F. deBergevin, A. Stunault, D. Gibbs and C. Giles
Phys. Rev. B **55**, 954 (1997)

[44] Reconstruction of surface morphology from coherent X-ray reflectivity

Vartanyants I.A., Pitney J.A., Libbert J.L., Robinson I.K.
Phys. Rev. B **55**, 13193 (1997)

[43] Casting technique for the fabrication of pinholes for X-ray radiation

J.F. van der Veen, A.J. Riemersma, H. Schlatter, D.L. Abernathy and G. Grübel
J. Sync. Rad. **4**, 64 (1997)

[42] An X-Ray Scattering Study of laterally modulated Structures: The Example of Diblock Copolymers

G. Vigaud, A. Gibaud, J. Wang, S.K. Sinha, J. Daillant, G. Grübel, and Y. Gallot
J. Phys. Condens. Matter **9**, L125 (1997)

[41] q Dependence of the Growth-Oscillation Period of X-Ray Reflectivity in Heteroepitaxy: Ho/W(110)

E. Weschke, C. Schüssler-Langheine, R. Meier, G. Kaindl, C. Sutter, D. Abernathy and G. Grübel
Phys. Rev. Lett. **79**, 3954 (1997)

[40] Studies of Thin-Film Growth with X-Rays at the ESRF

E. Weschke, C. Schüssler-Langheine, R. Meier, G. Kaindl, C. Sutter, D. Abernathy and G. Grübel
in "Proceedings of the 2nd Russian-German Workshop on Synchrotron Radiation Research in Atomic, Molecular and Materials Science", eds. V Adamchuk, W. Gudat, G. Kaindl and M. Kovalchuk, St. Petersburg, Russia (1997) p.170

[39] Determination of the in-plane elastic tensor of crystalline decanol monolayers on water by x-ray diffraction

C. Zakri, A. Renault, J.P. Rieu, M. Vallade, B. Berge, J.F. Legrand, G. Vignaud, G. Grübel
Phys. Rev. B **55**, 14163 (1997)

1996

[38] 1D X-ray speckle patterns: A novel probe of interfacial disorder in semiconductor lattices D.L. Abernathy, J. Als-Nielsen, S.B. Dierker, R. M. Fleming, G. Gruebel, R. Pindak, K. Ploog and I.K. Robinson
Solid-State Electronics **40**, pp.531-535 (1996)

[37] X-ray microprobes
P. Chevallier, P. Dhez, A. Erko, A. Firsov, J. F. Legrand, P. Populus
Nucl. Instr. Meth. B **113**, 122 (1996)

[36] Grazing incidence surface scattering of X-rays
J. Daillant, K. Quinn, C. Gourier, F. Rieutord
J. Chem. Soc., Faraday trans. **92**, 505 (1996)

[35] The resolution function in diffuse X-ray reflectivity
W.H. de Jeu, J.D. Shindler and E.A.L. Mol
J. Appl. Cryst. **29**, 511 (1996)

[34] A diamond double-crystal transmission monochromator for the Troika II station at ESRF
G. Grübel, D. Abernathy, G. Vignaud, M. Sanchez del Rio, A. K. Freund
Rev. Sci. Instr. **67**, 1 (1996)

[33] The alpha-Fe/epsilon-Fe-transition as an example of nuclear forward scattering on ⁵⁷Fe under high pressure
H. F. Günsteudel, H. J. Hesse, A. I. Chumakov, H. Grünsteudel, O. Leupold, J. Metge, R. Ruffer, G. Wortmann
Hyperfine interact. **C1**, 509 (1996)

[32] X-ray characterization of a SrTiO₃ bicrystal interface
A. Kazimirov, J. Zegenhagen, I. Denk, J. Maier, D. M. Smilgies, R. Feidenhans'l
Surf. Sci. **352-354**, 875 (1996)

[31] Self-assembly of organic films on liquid metals
O.M. Magnussen, B.M. Ocko, M. Deutsch, M.J. Regan, P.S. Pershan, L.E. Berman, D. Abernathy, J.F. Legrand, G. Grübel,
Nature **384**, 250 (1996)

[30] Characterization of interface roughness in W/Si multilayers by high resolution diffuse X-ray scattering
T. Salditt, D. Lott, T. H. Metzger, J. Peisl, G. Vignaud, J. F. Legrand, G. Gruebel, P. Hoghoj, O. Schaerpf
Physica B **221**, 13 (1996)

[29] Observation of the Huygens-principle growth mechanism in sputtered W/Si multilayers
T. Salditt, D. Lott, T. H. Metzger, J. Peisl, R. Fischer, J. Zweck, P. Hoghoj, O. Schaerpf, G. Vignaud
Europhys. Lett. **36**, 565 (1996)

[28] Interfacial roughness and related growth mechanisms in sputtered W/Si multilayers
T. Salditt, D. Lott, T. H. Metzger, J. Peisl, G. Vignaud, P. Hoghoj, O. Schaerpf, P. Hinze and R. Lauer
Phys. Rev. B **54**, 5860 (1996)

[27] Photon correlation spectroscopy of colloidal Palladium using a coherent X-ray beam

T. Thurn-Albrecht, W. Steffen, A. Patkowski, G. Meier, E. W. Fischer, G. Grubel, and D. L. Abernathy
Phys. Rev. Lett. **77**, 5437 (1996)

[26] Synchrotron x-ray-scattering study of the normal-incommensurate phase transition in Rb₂ZnCl₄

M.P. Zinkin, D. F. McMorrow, J. P. Hill, R. A. Cowley, J. G. Lussier, A. Gibaud, G. Gruebel and C. Sutter
Phys. Rev. B **54**, 3115 (1996)

1995

[25] QEXAFS in seconds at an undulator source

J. Als-Nielsen, G. Grübel and B.S. Clausen
Nucl. Instr. Meth. **B97**, 522 (1995)

[24] High Q-resolution X-ray diffraction of ordered Fe-Al single crystals

F. Bley, F. Livet, J. C. Leroux, J. P. Simon, D. Abernathy, J. Als-Nielsen, G. Gruebel, G. Vignaud, G. Dolino, J. F. Legrand, D. Camel, N. Menguy, M. Papoular
Acta Cryst. **A51**, 746 (1995)

[23] Asymmetrically cut crystals as optical elements for highly collimated X-ray beams

S. Brauer, G. B. Stephenson, M. Sutton, S. G. J. Mochrie, S. B. Dierker, R. M. Fleming, R. Pindak, I. K. Robinson, G. Gruebel, J. Als-Nielsen and D. L. Abernathy
Rev. Sci. Instr. **66**, 1506 (1995)

[22] X-ray intensity fluctuation spectroscopy observation of critical dynamics in Fe₃Al

S. Brauer, G. B. Stephenson, M. Sutton, R. Bruening, E. Dufresne, S. G. J. Mochrie, G. Gruebel, J. Als-Nielsen and D. L. Abernathy
Phys. Rev. Lett. **74**, 2010 (1995)

[21] First test of the scanning x-ray microprobe with Bragg-Fresnel multilayer lens at ESRF beamline

P. Chevallier, P. Dhez, F. Legrand, M. Idir, G. Soullie, A. Mirone, A. Erko, A. Snigirev, I. Snigireva, A. Suvorov, A. Freund, P. Engstroem, J. Als-Nielsen and G. Gruebel
Nucl. Instr. Meth. A **354**, 584 (1995)

[20] Energy dependence of nuclear recoil measured with incoherent nuclear scattering of synchrotron radiation

A.I. Chumakov, R. Rueffer, H. Gruenstedel, H. F. Gruenstedel, G. Gruebel, J. Metge, O. Leupold and H. A. Goodwin
Europhys. Lett. **30**, 427 (1995)

[19] Unexpected orientational effects in spin-cast, sub-micron layers of poly(alkylthiophene): A diffraction study with synchrotron radiation

H.J. Fell, E. J. Samuelsen, J. Als-Nielsen, G. Gruebel, J. Mardalen
Solid State Comm. **94**, 843 (1995)

[18] Structural aspects of oriented poly(octylphenylthiophene) studied in bulk and sub-micron layers by X-ray diffraction

H.J. Fell, E. J. Samuelsen, M. R. Andersson, J. Als-Nielsen, G. gruebel and J. Mardalen

Synthetic Metals **73**, 279 (1995)

[17] X-ray Fraunhofer diffraction patterns from a thin film waveguide

Y.P. Feng, S. K. Sinha, E. E. Fullerton, G. Gruebel, D. Abernathy, D. P. Siddons, J. B. Hastings
Appl. Phys. Lett. **67**, 3647 (1995)

[16] X-ray polarimetry with phase plates

C. Giles, C. Vettier, F. de Bergevin, C. Malgrange, G. Gruebel and J. Goulon
Rev. Sci. Instr. **66**, 1518 (1995)

[15] The Troika beamline at ESRF

G. Grübel, J. Als-Nielsen and D.L. Abernathy
Rev. Sci. Instr. **66**, 1687 (1995)

[14] Resonant magnetic scattering in holmium an an undulator source

G. Grübel, J. Als-Nielsen, C. Vettier, D. Gibbs, J. Bohr and D. Pengra
J. Magn. Magn. Mater. **140-144**, 755 (1995)

[13] Micro PIXE and micro SXRF: Comparison of the two methods and applications to glass inclusions from Vulcano (Eolian Islands, Italy)

M. Mosbah, R. Clocchiatti, V. Michaud, D. Piccot, P. Chevalier, F. Legrand, J. Als-Nielsen and G. Grubel
Nucl. Instr. Meth. B **104**, 481 (1995)

[12] Observation and explanation of one-dimensional X-ray speckle patterns from synthetic multilayers

I.K. Robinson, R. Pindak, R. M. Fleming, S. B. Dierker, K. Ploog, G. Gruebel, D. L. Abernathy and J. Als-Nielsen
Phys. Rev. B. **52**, 9917 (1995)

[11] Focussing characteristics of diamond crystal X-ray monochromators. An experimental and theoretical comparison.

M. Sanchez del Rio, G. Grubel, J. Als-Nielsen and M. Nielsen
Rev. Sci. Instr. **66**, 5148 (1995)

[10] Crystal structure of the N-Terminal domain from N-Cadherin determined by anomalous diffraction from undulator radiation

L. Shapiro, A. M. Fannon, P. D. Kwong, A. Thompson, M. Lehmann, G. Gruebel, J. F. Legrand, J. Als-Nielsen, D. R. Colmann and W. A. Hendrickson
Nature **374**, 327 (1995)

[9] Resonant magnetic scattering study of the 50% Ho-Tb alloy

A. Stunault, C. Vettier, F. de Bergevin, F. Maier, G. Grubel, R. M. Galera, S. B. Palmer
J. Magn. Magn. Mater. **140-144**, 753 (1995)

[8] Thermal diffuse X-ray scattering and its contribution to understanding protein dynamics

T. Thuene and J. Badger
Prog. Biophys. Mol. Bio. **63**, 251 (1995)

[7] Multiple station beamline at an undulator X-ray source

J. Als-Nielsen, A. K. Freund, G. Gruebel, J. Linderholm, M. Nielsen, M. Sanchez del Rio, and J. P. F. Sellschop
Nucl. Instr. Meth. B94, 306 (1994)

[6] Crystal structures at 2.5 Angstrom resolution of Seryl-tRNA synthetase complexed with two analogs of Seryl Adenylate

H. Belrhail, A. Yaremchuk, M. Tukalo, K. Larsen, C. Berthet-Colominas, R. Leberman, B. Beijer, B. Sproat, J. Als-Nielsen, G. Gruebel, J. F. Legrand, M. Lehmann and S. Cusack
Science 263, 1432 (1994)

[5] Melting of short 1-alcohol monolayers on water: Thermodynamics and X-ray scattering studies

B. Berge, O. Konovalov, J. Lajzerowicz, A. Renault, J. P. Rieu, M. Vallade, J. Als-Nielsen, G. Gruebel and J. F. Legrand
Phys. Rev. Lett. 73, 1652 (1994)

[4] Structural and thermochromic properties of mixtures of poly(3-hexylthiophene) and poly(3-octylthiophene)

H. J. Fell, E. J. Samuelsen, J. Mårdalen and P. H. J. Carlsen
Synthetic Metals 63, 157 (1994)

[3] The TROIKA beamline at ESRF

G. Grübel, J. Als-Nielsen and A.K. Freund
J. Phys. IV - Vol.4, C9/27 (1994)

[2] X-ray grazing incidence studies of the 2D crystallization of monolayers of 1-alcohols at the air-water interface

J. F. Legrand, A. Renault, O. Konovalov, E. Chevigny, J. Als-Nielsen, G. Grubel, and B. Berge,
Thin solid films 248, 95 (1994)

[1] Control of structure and growth of polymorphic crystalline thin films of amphiphilic molecules on liquid surfaces

S. P. Weinbach, K. Kjaer, W. G. Bouwman, G. Grubel, J. F. Legrand, J. Als-Nielsen, M. Lahav, L. Leiserowitz
Science 264, 1566 (1994)