Understanding biomineralisation: the inputs of micro- and nano-X-ray analysis

Programme

Wednesday, 10th February 2021 - Microsymposium UDM2		
Session I Chair: Philip COOK		
10:00 – 10:05	Introduction to the microsymposium UDM2 by Philip Cook	
10:05 – 10:40	Keynote 1: Gaining physico-chemistry insights on calcareous biomineralisation with x-ray coherent and incoherent nanobeam imaging approaches	**Virginie Chamard,** Institut Fresnel
10:40 – 11:00	Talk 1: Mechanical Adaptation of Brachiopod Shells Via Hydration-Induced Structural Changes	**Fabio Nudelman,** University of Edinburgh
11:00 – 11:20	Talk 2: X-ray nanotomography of coccolithophores	**Thomas Beuvier,** CNRS le Mans
11:20 – 11:55	Keynote 2: Biomineralization in Demosponges: From a single protein to an entire skeleton and back	**Igor Zlotnikov,** TU Dresden
11:55 – 12:25	Discussion	
Lunch Break		
Session II Chair: Julie VILLANOVA		
13:25 – 14:00	Keynote 3 Unravelling multiscale biological material design strategies via complementary synchrotron X-ray analysis techniques	**Boaz Pokroy,** Technion - Israel Institute of Technology
14:00 – 14:20	Talk 3: High resolution spatial analyses of trace elements in coccoliths: new insights into element incorporation in coccolithophore calcite	**Cinzia Bottini,** Milan university
14:20 – 14:40	Talk 4: Zn distribution and chemical speciation in benthic foraminifera shells grown in contaminated areas	**Daniela medas,** University of Cagliari
14:40 – 15:00	Talk 5: Examples of biomineralisation in terrestrial plants	**Paula Pongrac,** University of Ljubljana
Break		

Session II Chair: Bernhard Hesse		
15:15 – 15:50	Keynote 4: Contributions of x-ray scattering and diffraction to studying bone and other mineralized tissues	**Peter Fratzl,** MPI of Colloids & Interface
15:50 – 16:10	Talk 6: Exploring the 3D nano- and crystal structure of bone with tensor tomography	**Tilman Grunewald,** ESRF
16:10 – 16:30	Talk 7: Features of the Osteocyte Lacuno-Canalicular Network Revealed by Synchrotron X-ray Tomography	**Henrik Birkedal,** Aarhus University
16:30 – 16:50	Talk 8: Time-resolved *operando* X-ray micro-computed tomography of the demineralisation of human dental enamel	**Alexander Korsunsky,** Oxford
16:50 – 17:20	Discussion	