

BioTiNet Winter School – Final Programme

Materials Development on the Nanoscale

University of Vienna

25 February- 01 March 2014, Vienna, Austria

*) for details and addresses of sites, see appendix

Tuesday, 25.02.2014

| | |
|----------|--|
| Arrivals | |
| 15.00 | Registration & Welcome Reception (Palais Strudlhof*) |
| 19.30 | Concert (Vienna Concert Hall*) (Vienna Symphonic Orchestra, optional by own costs) |

Wednesday, 26.02.2014, Palais Strudlhof*

| | | |
|--|--|---|
| 08.00-08.45 | Registration | |
| 08:45-09.00 | Welcome Address, Conference Informations | <i>M. Zehetbauer</i> (Univ. Vienna, Austria) |
| ▪ Session: Structure & Properties of Bone, Prostheses Interaction | | <i>Chair: R. Brooks,</i> (Univ. Cambridge, UK) |
| 09.00-09.30 | Keynote talk Structures and Dynamic Processes in Bone | <u>R. Weinkamer</u> , P. Fratzl (MPI Colloids & Interfaces, Potsdam, Germany) |
| 09.30-10.00 | Keynote talk Amorphous alloys in medicine | <u>J.D. Cao</u> , J. Löffler (ETH Zürich, Switzerland) |
| 10.00-11.00 | ESR & ER Presentations (20 min./ fellow) ESR 10/ M. Golozar (UCAM): Surface Modifications, Ti-based Glasses, Bioactive Coatings ESR 12/ M. Lorenzetti (IJS): Predictions on the Hemocompatibility & Osteogenesis of Hydrothermally Coated Ti-Based Implants ER 3/ E. Tanase (UCAM): Human Cells Response to Ti-Based Materials | |
| 11:00-11.30 | Coffee break | |
| ▪ Session: Special Materials And Methods I | | <i>Chair: N. Grobert</i> (Univ. Oxford, UK) |
| 11:30-12:00 | Keynote talk Exciting Graphene: Structure – Defects - Properties | J. Meyer (Univ. Vienna, Austria) |
| 12.30-14.00 | Lunch | |
| Session: Modeling & Simulation | | <i>Chair: C. Lekka</i> (Univ. Joannina, Greece) |
| 14.00-14.30 | Keynote talk DFT Calculations by VASP: Fundamentals & Applications | <u>M. Marsman</u> , G. Kresse (Univ. Vienna, Austria) |
| 14.30-15.00 | Keynote talk Mechanical Properties of Nanoporous Materials – Modeling & Simulations | N. Huber (Helmholtz- Zentrum Geesthacht, Germany) |
| 15.00-15.30 | Coffee break | |

| | |
|-------------|--|
| 15.30-16.30 | ESR & ER Presentations (20 min./ fellow) ESR 2/J.J. Gutiérrez Moreno (UOI): Binary & Ternary Ti-Based Alloys: A Computational Study ESR 11/ G. Yablokova (KUL): Biocompatible porous titanium scaffolds, Selective Laser Melting ESR 6/ M. Speirs (KUL): Selective Laser Melting & Scaffold Production |
| 19.00 | Vienna Winery Evening (Vienna-Grinzing*) |

Thursday, 27.02.2014, Palais Strudlhof*

| | | |
|-------------|---|--|
| 08.30-09.00 | Registration | |
| | <ul style="list-style-type: none"> Session: Properties of SPD Ti-Nano-Materials I | Chair: M. Lewandowska (Warsaw Univ.Technol., Poland) |
| 09.00-09.30 | Keynote talk TEM of Nano-Materials | Ch. Rentenberger (Univ. Vienna, Austria) |
| 09.30-10.30 | ESR & ER Presentations (20 min./ fellow) ESR 5/ A. Panigrahi (UniVie): SPD Methods, ns/UFG β -Ti Alloys ESR 8/ K. Ozaltin (WUT): Fatigue Resistance of ns/UFG β -Ti Alloys & Glasses ESR 1/ M. Bönisch (IFW): Phase Transformations, Shape Memory Effects | |
| 10.30-11:00 | Coffee break | |
| | <ul style="list-style-type: none"> Session: Properties of SPD Ti-Nano-Materials II | Chair: T. Waitz (Univ. Vienna, Austria) |
| 11.00-11.30 | Keynote talk Textures & Mechanical Properties of Nanomaterials | W. Skrotzki (TU Dresden, Germany) |
| 11.30-12.30 | ESR & ER Presentations (20 min./ fellow) ER 1/ B. Sulkowski (UniVie): Simulations of Mechanical Properties of SPD Ti-based Alloys ER 6/ I. Mircheski (Helipro): 3D Finite Element Analysis of Ti-based Alloy Prostheses ER 4/ S. Dadbakhsh (KUL): Laser Assisted Additive Manufacture Methods | |
| 12.30-14.00 | Lunch | |
| | <ul style="list-style-type: none"> BioTiNet Networking (for BioTiNet members only) | Chair: M. Calin (IFW Dresden, Germany) |
| 14.00-15.30 | BioTiNet Scientific Achievements - Work package discussion (Coffee & Drinks inside) | J. Schrooten (KUL), M. Zehetbauer (UniVie), S.Best/R.Brooks (UCAM), A.Blatter/L.Reclaru (PMT) |
| 15.30-16.00 | BioTiNet Fellows Meeting (Coffee & Drinks inside) | M. Golozar (UCAM, UK) D. Beitelschmidt (IFW Dresden, Germany) |
| 16.00-19.00 | Excursion Austrian National Library*, Hofburg State Hall & Globe Museum | |

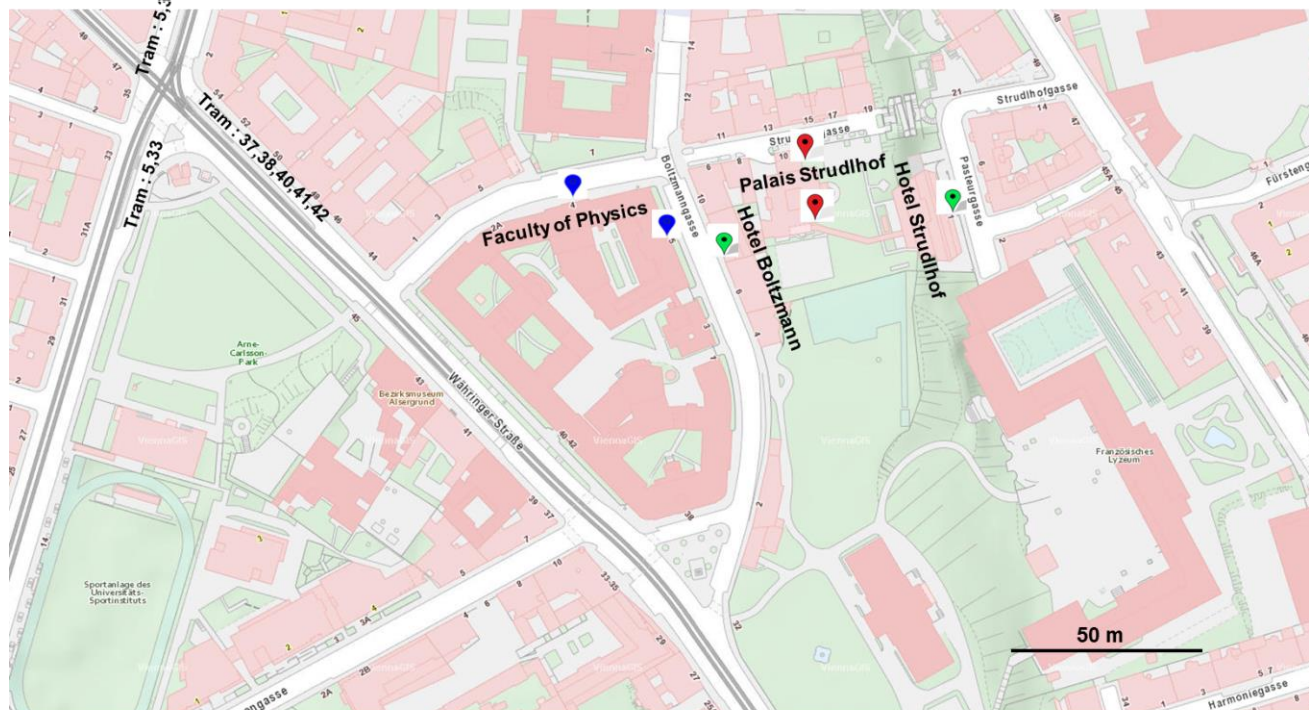
Friday, 28.02.2014, Palais Strudlhof* (morning), Faculty of Physics* (afternoon)





| | | |
|-------------|--|---|
| 8.30-09.00 | Registration | |
| | ▪ Session: Nanoscaled Materials & Surfaces in Medical Apps | <i>Chair: U. Klement (Chalmers Univ.Techn., Gothenburg, Sweden)</i> |
| 9.00-09.30 | Keynote talk <i>Coated implants in osteoporosis and infections: Potential benefit for patients?</i> | R. Schnettler (Klinikum Giessen/Marburg, Germany) |
| 9.30-10.30 | ESR & ER Presentations (20 min./ fellow) ESR 7/ N. Stepina: Carbon Nanotubes, Strong biocompatible CNT/ β -Ti Alloy Composite Materials ESR 9/ S. Abdi: Corrosion, Ti-based Glasses, Surface Modifications ER 5/ F. Constantin: Life Cycle Tests in Static and Dynamic Stress, Cations Release Evaluation from Ti alloys | |
| 10.30-11.00 | Coffee break | |
| | ▪ Session: Glasses & Nanocomposites | <i>Chair: L. Greer (Univ. Cambridge, UK)</i> |
| 11.00-11.30 | Keynote talk From Nano- to Glassy Materials | G. Wilde (Univ. Munster, Germany) |
| 11.30-12.30 | ESR & ER Presentations (20 min./ fellow) ER 2/ S. Pauly: Mech.Properties of Metastable Cu-Zr-based Cryst. & Glassy Alloys ESR 3/ Y. Guo: Bulk Metallic Glasses ESR 4/ A. Hynowska: Ti-based Glasses, Nano-composite Materials | |
| 12.30-14.00 | Lunch | |
| 14.00-14.30 | BioTiNet Management Meeting <i>(Christian Doppler Auditory*)</i> | D. Beitelschmidt (IFW Dresden, Germany) |
| 14.30-17.30 | Lab Tours (Faculty of Physics, Observatory of Univ. Vienna) *) | |
| 19.30 | Festive Conference Dinner (City Hall* - Reception of Lord Mayor of Vienna) | |

Saturday, 01.03.2014, Faculty of Physics*

| | | |
|-------------|---|---|
| 9.00-09.30 | Registration | |
| | ▪ Session: Special Materials & Methods II | <i>Chair: M. Zehetbauer (Univ. Vienna, Austria)</i> |
| 9.30-10.00 | Keynote talk Magnetic Nanomaterials & Magnetocalorics | S. Kobe (J.Stefan Institute, Slovenia) |
| 10.00-10.30 | Keynote talk X-ray Line Profile Analysis of Nanomaterials | E. Schafner (Univ. Vienna, Austria) |
| 10.30-11.00 | Coffee break | |
| 11.00-11.45 | General Discussion, Conclusions, Outlook | J. Eckert, M. Calin (IFW Dresden, Germany) |
| 11.45-12.00 | Closing Address | M. Zehetbauer (Univ. Vienna, Austria) |
| 12.00-14.00 | Farewell Lunch <i>(Culinarium Cooking* – Chinese & Japanese Food)</i> | |

*** Addresses Of Conference, Hotels, and Events**



-  Palais Strudlhof, Strudlhofgasse 10, 1090 Vienna (Welcome, Conference: Feb 25 – Feb 28 morning)
-  Hotel Strudlhof, Pasteurgasse 1, 1090 Vienna
-  Hotel Boltzmann, Boltzmannngasse 8, 1090 Vienna
-  Christian Doppler Auditory, Faculty of Physics, University Vienna, Strudlhofgasse 4, 1090 (Conference, Labs: Feb 28 afternoon – March 1)

| Event | Place | Address |
|---|---|----------------------------|
| - | Hotel Boltzmann | 1090 Boltzmannngasse 8 |
| - | Hotel Strudlhof | 1090 Pasteurgasse 1 |
| Welcome | Palais Strudlhof | 1090 Strudlhofgasse 10 |
| Concert | Wiener Konzerthaus | 1030 Lothringerstraße 20 |
| Conference (Feb 26 -Feb 28 AM) | Palais Strudlhof | 1090 Strudlhofgasse 10 |
| Conference (Feb 28 PM- March 1), and Lab tours | Faculty of Physics, University of Vienna, Christian Doppler Auditory | 1090 Strudlhofgasse 4 |
| Vienna Winery Evening | Heuriger Feuerwehr Wagner | 1190 Grinzinger Strasse 53 |
| Excursion | Austrian National Library, Hofburg | 1010 Heldenplatz |
| Reception of Lord Mayor of Vienna | Vienna City Hall, Wiener Rathauskeller | 1010 Rathausplatz 1 |
| Farewell Lunch | Culinarium Cooking | 1090 Währinger Strasse 21 |