TECHNISCHE UNIVERSITÄT WIEN

Program of the 37th Workshop

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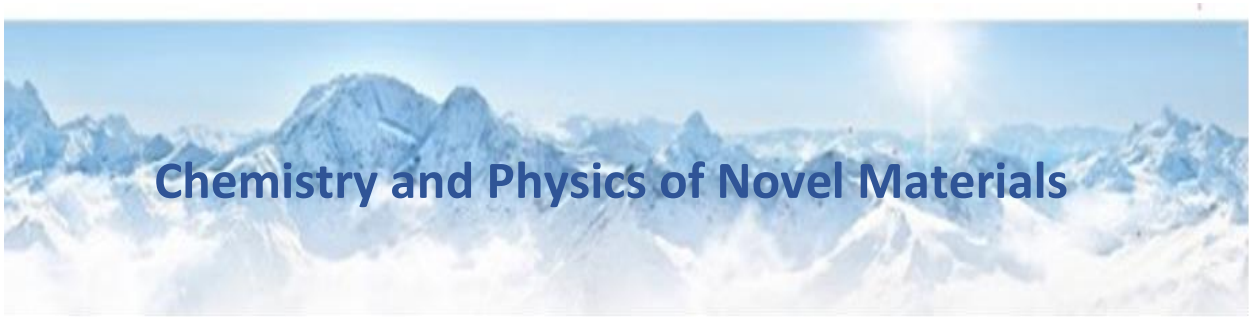

Chemistry and Physics of Novel Materials

JUFA Schladming
February 04 - 09, 2024

Location

JUFA Hotel Schladming
Coburgstrasse 253, A – 8970 Schladming
Tel: +43(0) 5/7083-330
Fax: +43(0) 5/7083-331

Dates

Arrival: Sunday, February 4th, 2024
(Dinner 18:00, Get Together 20:00)
Departure: Friday, February 9th, 2024

Organizers:

Univ.Prof. Dr. Günther Rupprechter
Ao.Univ.Prof.Dr. Peter Blaha
Institute of Materials Chemistry
TU Wien, Getreidemarkt 9/E165, A-1060 Vienna
Tel: +43 (1) 58801-165101
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Program Committee

B. Batlogg	P. Blaha	U. Diebold
F. Gießibl	J. Kunze-Liebhäuser	A. Pimenov
G. Rupprechter	K. Schwarz	P. Weinberger

https://www.tuwien.at/tch/imc/konferenzen/37th-workshop-on-chemistry-and-physics-of-novel-materials

Scientific Program

Monday, Feb. 5th, 2024

Surface Science and Catalysis, powered by MECS ®

Chair: Günther Rupprechter (TUW)

14:00	**Opening 37th Workshop**
14:05	**Introduction**
14:20	**Dominik Eder** (TUW) Metal-organic frameworks as next-generation photocatalyst
15:00	**Coffee Break**
15:30	**Jörg Libuda** (Univ. Erlangen) Atomic Layer Deposition of semiconductor films on functionalized oxides: in-situ studies in ultrahigh vacuum and in liquid environment
16:10	**Christophe Copèret** (ETH Zurich) (NMR) Centered on Metals
16:40	**End**

18:00	**Dinner**

Evening Session: Chair: Aleix Comas-Vives (TUW)

19:30	**Philipp Winkler** (TUW) How in situ correlative microscopy can image interface and particle size effects in catalytic reactions
20:00	**Shun Kashiwaya** (Linköping University) Single-atom-thick sheets of gold—goldene—and perspectives in their potential application
20:30	**End**

For all talks leave 5-10 min discussion time !!

Tuesday, Feb. 6th, 2024

MECS: Episode II

Chair: Alexander Genest (TUW)

14:00	**Konstantin M. Neyman (ICREA & Univ. Barcelona)** Quantifying interface effects in catalytic nanomaterials combining DFT modelling and experiments
14:40	**Alexey Cherevan** (TUW) Molecular polyoxo- and thiometalate clusters as a bridge between homogeneous and heterogeneous photocatalysis
15:10	**Coffee Break**
15:30	**Introduction: Peter Weinberger** (TUW)
15:45	**Birgit Weber** (Friedrich-Schiller-Universität Jena) Switchable spin states in the city of light
16:25	**End**

18:00	**Dinner**

Highlights in Advanced Coordination and Metal-organic Chemistry

Evening Session: Chair: Peter Weinberger (TUW)

19:30	**Grace Morgan** (University College Dublin) Spin-state switching in non-centrosymmetric crystals
20:00	**Martin Huber (TUW)** Spin switching luminescent Fe(II) tetrazole-BODIPY complexes
20:30	**End**

For all talks leave 5-10 min discussion time !!

Wednesday, Feb. 7th, 2024

Topologically Nontrivial Materials

Chair: **Andrei Pimenov** (TUW)

14:00	Introduction to Topology and Magnetism (Andrei Pimenov)
14:20	**Florian Libisch** (TUW) Quantum Hall edge states using Scanning Tunneling Microscopy
14:55	**Coffee Break**
15:25	**Ekaterina Pomjakushina** (PSI Villigen) Crystal growth and physical properties of crystals with topological magnetic phases
16:00	**Vladimir Pomjakushin** (PSI Villigen) Topological magnetic structures in MnGe and CeAlGe: Neutron diffraction and symmetry analysis
16:35	**End**

For all talks: 5-10 min discussion suggested !!

18:00	**Dinner**

Evening Session: Chair: Peter Blaha (TUW)

19:00	**Meeting of the Program Committee**
19:30	**Poster short presentations and poster session**

Please prepare a 3 minutes poster presentation (max 3 slides !) and send it to peter.blaha@tuwien.ac.at

Thursday, Feb. 8th, 2024

New Faces at the TU Wien

Chair: **Andrei Pimenov** (TUW)

14:00	**Introduction to modern magnetism**
14:10	**Marta Gibert** (TUW) Magnetic double-perovskite oxide heterostructures
14:45	**Coffee Break**
15:15	**Amalio Fernández-Pacheco** (TUW) 3D magnetic nanomaterials for computing applications
15:50	**Andrej Pustogow (TUW)** New Spin on Electrons in Solids: Stress Reduces Frustration
16:25	**Philipp Haslinger** (TUW) Electron spin resonance meets electron microscopy
17:00	**End**

18:00	**Dinner**

Evening Session: Chair: Peter Weinberger, Science Busters

19:30	**Bertram Batlogg** (ETH Zurich) Technology: never enough?
20:15	**Anna Pimenov** (TUW) Old Art – New Science
20:45	**End**

For all talks leave 5-10 min discussion time !!

Friday, Feb. 9th, 2024

Sci-Mix

Chair: Johannes Zeininger (TUW)

14:00 Xiaoyu Zhou (ETH Zürich)
Small cobalt nanoparticles favor reverse water-gas shift reaction over methanation under CO_2 hydrogenation conditions

14:30 Aleix Comas-Vives (TUW)
Modelling the nature and dynamics of active sites in heterogeneous catalysts

15:00 Camilla Codeço (Federal University of Rio de Janeiro)
Insights into the reactivity of Mn_3O_4 (001) thin films with water

15:30 Closing Remarks

16:00 End

For all talks leave 5-10 min discussion time !!

POSTER CONTRIBUTIONS

Investigation of magnetic states in multilayers with chiral interlayer interactions
M. Á. Cascales Sandoval

Exploring the synergies of gamma alumina and tutton salt hydrates in thermochemical energy storage
J. Smith, J. Werner, F. M. Kapsamer, A. Ristić, A. Werner, P. Weinberger

Miniaturized Mössbauer spectrometer mimos: Selected by esa for a moon mission
F. Renz, F.-W. Bauer, J. Pawlak, M. Beyki, R. Lucka, R. Gieseler, K. Tran, M. S. Kilic, M. Linnemann, M. Smajlaj, A. Sander, J. Brehme, L. Renz, M. Renz, H. Gaber, R. F. Sindelar, D., R. Patzke, C. Rajnák, R. Boča

Single particle catalysis
J. Zeininger, M. Raab, G. Rupprechter

Harnessing low-grade heat for sustainable power generation: advancing materials and beyond
F. M. Kapsamer, J. Smith, J. Werner, A. Werner, P. Weinberge

Calcium dicarboxylate salt hydrates as thermochemical energy storage materials for household applications
J. Werner, J. Smith, A. Werner, P. Weinberger

Research on new potential materials for thermochemical energy storage : Alums and composite materials
A. Larchier, J. Smith, A. Ristic, P. Weinberger

Sodium nanoparticle adsorption on magnesium oxide surface using full potential plane wave methods
R. Mohammad, A. Elashqar

General Information:
Breakfast: 07.00 – 10.30
Dinner: 18.00 – 19.00