

TACO Newsletter

01/2025



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Reporting period: December 2024 – January 2025

1. Personnel Developments



[Paul Haidegger](#), master student in P02, recently finished his master's studies and graduated to "Diplom-Ingenieur" with a thesis titled "*Evolutionary and Gradient-Based Optimization Methods in Tensor LEED*". You find more information about his work on the [website of the surface physics group](#) of TU Wien. Paul is here pictured with his thesis advisors Michael, Alex, and Michele in front of his poster contribution to the Franz Viehböck Young Investigator Award. Congratulations, DI Paul!



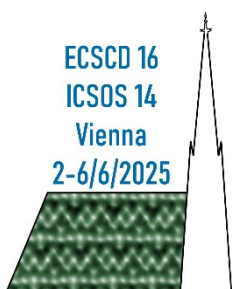
[Florian Schrenk](#), a PhD student associated with P10, successfully defended his PhD thesis on December 16th, 2024. His thesis is titled "*Perovskite Catalysts for Green Energy*". Congratulations, Dr. Florian!

Please inform the TACO science manager, [Stefan Uttenthaler](#), about personnel developments in your subproject.

2. Upcoming Events



While we are preparing for the TACO PhD Meeting 2025, please mark your calendar for the **TACO Retreat 2025**. It will take place again in **Steinschaler Dörfli** from **September 22 to 24, 2025**.



ECSCD 16
ICSOS 14
Vienna
2-6/6/2025

The 16th European Conference on Surface Crystallography and Dynamics (**ECSCD-16**) and the 14th International Conference on the Structure of Surfaces (**ICSOS-14**) will be held at TU Wien from **June 2 to 6, 2025**. A team around Ulrike Diebold organizes the conference. The abstract submission deadline is March 31, and the registration deadline is May 12. You can find all the necessary information on the [conference website](#).

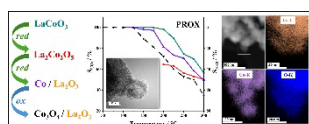


A LEED- $I(V)$ Workshop will take place on June 6 and 7 right after the ECSCD-16/ICSOS-14 conference. This satellite LEED $I(V)$ Workshop aims to convene and support the LEED community. The workshop will cover three topics: (i) measurements, (ii) data extraction and processing, and (iii) calculations and structure optimization. You find more information on the [workshop website](#).

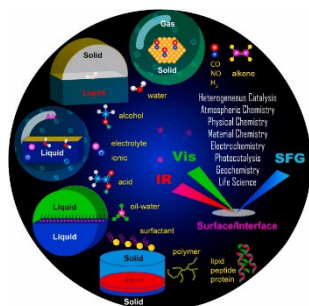
The **TA[CO]loquium** schedule for the summer semester of 2025 has been established. The talks will take place in a new room at TU Wien: **Sem.R. DA grün 02 B** in the Freihaus. The previous HS 7 was unavailable for our time slot. Nevertheless, the seminar room is near HS 7 and should be easy to find. We are trying to schedule one more talk in June.

Date	Speaker	Title
Mar 24	Veronica Ganduglia-Pirovano (CSIC, Madrid)	<i>Metal-CeO₂ Interfaces and their Role in Methane Conversion to Fuels</i>
Mar 31	Frieder Mugele (University of Twente)	<i>From Interfaces to Interphases: Revealing Complexities of Multi-Component Systems by In-Situ Force and Optical Microscopies</i>
May 12	Dario J. Stacchiola (Brookhaven)	<i>tbd</i>
June	tbd	<i>tbd</i>

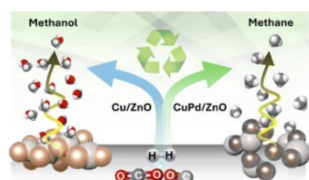
3. TACO Papers



The subprojects P08 ([Günther Rupprechter](#)) and P10 ([Karin Föttinger](#)) joined forces to write up the article “[Preferential CO oxidation \(PROX\) on LaCoO₃-based catalysts: Effect of cobalt oxidation state on selectivity](#)”. [Nevzat Yigit](#) is the first author of this joint paper that has been published in the *Journal of Catalysis*. Congratulations!



[Xia Li](#) and [Günther Rupprechter](#), both from subproject P08, published the paper “[Sum frequency generation \(SFG\) spectroscopy at surfaces and interfaces: Adsorbate structure and molecular bond orientation](#)” in the journal *Surface Science Reports*. Their review illustrates basic SFG concepts, theory, operation modes, and recent extensions and developments of SFG. Excellent work!



[Qaisar Maqbool](#) and [Günther Rupprechter](#), both from subproject P08, are the first and last authors on a paper describing “[Bimetallic CuPd nanoparticles supported on ZnO or graphene for CO₂ and CO conversion to methanol and methane](#)”. The article is part of the themed collection “CO₂ Conversion” in the journal *RSC Sustainability*. Well done!

The complete, up-to-date [TACO publication list](#) can be found on our website.

4. New Projects and Grants



[Chunlei Wang](#), postdoc in P04, successfully applied for a principal investigator project with the Austrian Science Fund FWF. He received almost 450 k€ to study "[Protected Single-Atom Catalysts](#)" for the next four years. Well done!



[Cesare Franchini](#), PI of subproject P07, also secured funding from the FWF for an international principal investigator project. He received 560 k€ for four years and will collaborate with partners from Belgium, Japan, and the US to study "[Spin-Orbit Entangled Anharmonic Polarons](#)". Congratulations!

5. Awards and Achievements



[Esther Heid](#) was officially promoted to Assistant Professor at TU Wien. Congratulations, Esther!



[Maximilian Raab](#), a PhD Student associated with P08, received the [Award of Excellence 2024](#) from the Austrian Ministry for Education, Science, and Research for his PhD on chemical dynamics in catalysis. The thesis title is “*Non-linear chemical dynamics of hydrogen oxidation on rhodium catalysts: Complementary in-situ microscopy and microkinetic modelling*”. Congratulations, Maximilian!

6. Miscellaneous



David Kubička, UCT Prague:
The Peculiar Role of Supports
in the Hydrogenation
of Biomass-Derived Oxygenates
TACO Colloquium
16 December 2024

[David Kubička](#) from the University of Chemistry and Technology Prague visited us in December and gave a TACO colloquium talk on “*The Peculiar Role of Supports in the Hydrogenation of Biomass-Derived Oxygenates*”. The [video of his talk](#) is now online on our YouTube channel. Enjoy!

Our [YouTube channel](#) is an excellent opportunity to follow inspiring talks when you missed them or listen to them again. You are welcome to subscribe to the channel and give the videos some thumbs-up! If you are on Twitter, you can follow [our account here](#); if you are on LinkedIn, you will find [the same opportunity here](#).