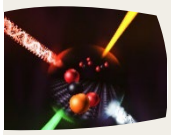
Newsletter 16 | July 2026



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Co-ACCESS Semi-Annual

Consortium for Operando and Advanced Catalyst Characterization via Electronic Spectroscopy and Structure

Summer Edition

Co-ACCESS Hits 150 Publications!

As the USA marked its 250th birthday this July, the Co-ACCESS team also reached a significant milestone: our 150th publication since our founding a decade ago. We view this achievement not as a finish line but as a steppingstone toward future discoveries, and we extend our sincere gratitude to all the collaborators – across all fields of catalysis - who made this achievement possible!

Co-ACCESS Office Hours:

Reminder office hours are held once a month on Tuesdays, if you have any questions about XAS data processing, modeling, and experimental design, stop in during our monthly office hours. If you would like to be added to the mailing list, please reach out to us at co-access_ssrl@slac.stanford.edu.

Beamline 10-2 Commissioning:

Beamline 10-2 commissioning continues. In March, staff at SSRL including Adam Egger, Enrico Tusini, and Jorge Perez-Aguilar commissioned the QXAS software for data collection and exporting. We will continue commissioning QXAS together with gridded ion chambers to demonstrate its full functionality. Over the summer, we hope to have our collimating mirror installed and begin the commissioning of both it and our focusing mirror.

Ge Detector Commissioning:

In June of 2026, we successfully recorded high quality XAS spectra from a 5 nm thick copper thin film using the new 24-element Ge detector.

Science Commissioning Update:

Over the next year we will continue the BL 10-2 science commissioning with “friendly” users to aid us in troubleshooting.

The Co-ACCESS Team on a Business Trip!!!

In February 2026, the Co-ACCESS team was invited by Prof. Dionisios Vlachos (University of Delaware) to deliver a three-day XAS training course. The course covered the fundamentals of XAS data analysis and modelling, as well as best practices for conducting operando XAS experiments.

The team thoroughly enjoyed engaging with students from diverse research backgrounds, spanning catalysis to geoscience, and the sessions generated stimulating discussions and rich teaching moments throughout. This invitation reflects the broader mission of the Co-ACCESS team, which extends beyond supporting users during beamtime to actively teaching and advancing XAS expertise across the research community.

Operando VIII

8th International Congress on Operando Spectroscopy
Asilomar, CA (USA), 10-14 May 2026

The 8th International Congress on Operando Spectroscopy, co-organized by Simon R Bare and Janos Szanyi, was held May 10–14 at the Asilomar Conference Center in Pacific Grove, CA. Co-ACCESS acted as local organizers for the conference. In all, there were 108 attendees, from 18 different countries, contributing 45 oral presentations and 49 poster presentations. The standard of the talks and posters was excellent and appreciated by all the attendees. The attendees enjoyed s'mores at a bonfire reception and took advantage of the beautiful California coastline. We are indebted to the many sponsors and vendors who contributed financially to allow discounted registration for the students and postdocs.

Meet Our Summer Intern – Nora Kovscek

Nora is a rising Junior studying Earth Science at UC San Diego. This summer she is working with Adam Hoffman and Co-ACCESS on two projects. One project involves expanding the work of last summer's intern project of studying how the use of different mixing techniques of a catalyst impacts its structure, using infrared spectroscopy. For the other project, she will be using failure mode analysis to test how epoxy glue preparation impacts the durability of the seal in catalytic reactors. Through these projects, she is looking forward to strengthening her laboratory skills and deepening her understanding of catalysis research.

Key Recent Publications

"Metal hybridization in dilute-alloy catalysts promotes sintering resistance by decreasing surface mobility", Finzel, J., Dannar, A., Sun, S., Hoffman, A. S., Soni, Y., Wang, B., Bare, S. R., Charles, E., Sykes, H., & Christopher, P., *Nature Materials*, (2026), **25**, 964-971. https://doi.org/10.1038/s41563-026-02489-7.

"The Ever-Evolving Active Site: Transformation of Single Atoms to Extended Structures during Rh-catalyzed Reverse Water-Gas Shift Reaction", G. Barber, X. Chen, A. Khan, J. Heinlein, S.M. Gericke, M. Li, D. Zakharov, J. Yang, A.R. Head, M. Cargnello, R.M. Rioux, Simon R Bare, *Faraday Discussions*, (2026), online. DOI: 10.1039/D5FD00172B.

"Majority Ga(I) Sites in H_2 Activated Ga/-Al_2O_3 and Ga/ZSM5 Catalysts Exhibit Distinctive XANES and Anomalous EXAFS Behavior", J.A. Chalmers, F.D. Vila, L. Li, A.S. Hoffman, J. Dong, S.R. Bare, S.L. Scott, *ACS Catalysis*, (2026) **16**, 2646-2657. DOI: 10.1021/acscatal.5c08068.

"Dynamic features of Cu-ceria interface under CO_2 Hydrogenation to Methanol", Y. Li, Y. Chen, H. Song, K.A. Unocic, J. Perez-Aguilar, J. Hong, A.S. Hoffman, J. Moncada, J. Kim, L. Daemen, Y. Cheng, C. Wang, S.D. Senanayake, S.R. Bare, D. Jiang, Z. Wu, *ACS Catalysis*, (2026), **16**, 1132-1143. DOI: 10.1021/acscatal.5c06321.

We invite any catalysis researcher to contact us prior to submitting a proposal to SSRL, or prior to their upcoming experiment. We can advise you at the appropriate level with the expressed aim of trying to maximize the success of your time at SSRL. We look forward to collaborating with you! srbare@slac.stanford.edu https://web.slac.stanford.edu/coaccess/