

THE WORLD COMES HERE.
TMS 2025
154th Annual Meeting & Exhibition



March 23–27, 2025
MGM Grand Las Vegas
Hotel & Casino
Las Vegas, Nevada, USA
#TMSAnnualMeeting



SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2025 SYMPOSIUM:

DATA-DRIVEN AND COMPUTATIONAL MATERIALS DESIGN



**Thermodynamics and Phase Diagrams
Applied to Materials Design and
Processing: An FMD/SMD Symposium
Honoring Rainer Schmid-Fetzer
(Invited Abstracts Only)**



This symposium is dedicated to the innovative contributions made by Professor Rainer Schmid-Fetzer to materials science for over forty years. With his background in metallurgy and physics he has earned merits in materials thermodynamics and constitution of multicomponent and multiphase materials, phase diagram calculation software algorithm design, thermodynamic model and database development, and their applications in solidification, microstructure development, interface reactions in bulk and thin film materials, and computational design of materials. To honor the broad range of Rainer Schmid-Fetzer's research on alloys, semiconductors, ceramics and functional materials, the symposium will highlight work that integrates experimental and computational investigations. It is being held to celebrate Rainer Schmid-Fetzer's lifelong and ongoing contributions as Professor Emeritus to our materials science community.

This symposium welcomes contributions from all the aspects depicted above, including but not limited to the following topics:

- Thermodynamics and constitution of multicomponent and multiphase materials.
- Thermodynamic modeling, CALPHAD method and applications to computational design of materials and process optimization.
- CALPHAD database development comprising critical assessment and inclusion of ab initio methods.
- Solidification of alloys and microstructure development studied by experiments and CALPHAD simulations.
- Reactivity at interfaces in bulk and thin film materials, bonding and contacts in electronic materials relating to thermodynamics and kinetics.
- Li-battery materials development supported by thermodynamic and kinetic studies.

ORGANIZERS

Shuanglin Chen, CompuTherm LLC; **Ji-Cheng Zhao**, University of Maryland; **Ursula Kattner**, National Institute of Standards and Technology; **Greta Lindwall**, KTH Royal Institute of Technology; **Alan Luo**, Ohio State University; **Arthur Pelton**, Ecole Polytechnique; **John Agren**, Royal Institute of Technology; **Sinn-wen Chen**, National Tsing Hua University

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QUESTIONS?

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