

ChemCatBio Webinar Series

“Perspectives on Engineered Catalyst Design and Forming”



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Webinar Link and Registration: https://nrel.zoomgov.com/webinar/register/WN_qRLO168gSt-Ks5sxWefryg

The performance evaluation, and ultimate commercial adoption, of next-generation catalyst materials requires the development of strategies for preparing complex “engineered” catalysts (i.e., active phase, support, binder, modifiers, filler, porogen, etc.) suitable for operation in commercially relevant reactor configurations and scales. This complexity contrasts to research catalysts studied at the laboratory-scale, where relatively simple catalyst formulations (i.e., active phase, support) and rapid catalytic evaluation have led to a robust catalyst development cycle of synthesis, characterization, computational modeling, and evaluation that operates at the core of ChemCatBio. Moreover, the impact of translating the syntheses of these catalysts from the laboratory- to engineering-scale on key physical properties (e.g., ionic speciation, co-location of active sites, active site ratios, particle size) remains largely unexplored. However, understanding these impacts is critical to reducing risk associated with commercial adoption of these technologies.

In order to leverage the fundamental advancements ChemCatBio has made in catalyst technology, the consortium has recently implemented a new vision to address this risk by focusing on process integration and fuel production with engineered catalysts. In this webinar, we will present (1) critical considerations for the “engineered” catalyst, (2) an industrial perspective on catalyst design and forming, and (3) ChemCatBio’s industry-informed capabilities that support the transition to more commercially relevant catalyst forms.

For more information, please visit our website at ChemCatBio.org or email us directly at Contact@ChemCatBio.org. ChemCatBio is funded by the U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Bioenergy Technologies Office.