

Research interests

Dr. ir. Jingxiu Xie (JX) is a tenure track research assistant professor in the Green Chemical Reaction Engineering unit of the Engineering and Technology Institute Groningen, University of Groningen. Her research group focuses on catalytic processes for gas conversion, specifically on the efficient utilization of various (waste or circular) carbon feedstock. Her expertise lies in the synthesis and evaluation of catalytic performance of solid catalysts, with an emphasis on exploiting thermodynamics and kinetics to drive selectivity. The synthesis methods provide options to design and develop catalysts with tailor-made properties, thereby allowing structure-performance relationships of catalysts to be established. Her capability and interests in fixed-bed reactors range from high-throughput parallel reactor set-ups to single reactor advanced kinetic set-ups (steady state isotopic transient kinetic analysis, tapered element oscillating microbalance and co-feed transients). Recently she is exploring new reactor engineering and process intensification concepts for the conversion of $\text{CO}_2/\text{CO}/\text{H}_2$ to chemicals and fuels.