**Selected Recent Publications (2017-2021)**

Z. Xie\*, L.R. Winter and J.G. Chen\*, “Bimetallic-Derived Catalysts and Their Application in Simultaneous Upgrading of CO2 and Ethane”, *Matter*, accepted (2021).

L.R. Winter and J.G. Chen\*, “N2 Fixation by Plasma-Activated Processes”, *Joule*, accepted (2021).

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Y. Wang, Y. Nian, A.N. Biswas, W. Li, Y. Han\* and J.G. Chen\*, “Challenges and Opportunities in Utilizing MXenes of Carbides and Nitrides as Electrocatalysts”, *Advanced Energy Materials*, 10 (2020) 2002967.

Z. Xie, D. Tian, M. Xie, S. Yang, Y. Xu, N. Rui, J.H. Lee, S.D. Senanayake, K. Li, H. Wang, S. Kattel and J.G. Chen\*, “Interfacial Active Sites for CO2-Assisted Selective Cleavage of C-C/C-H Bonds in Ethane”, *Chem*, 6 (2020) 2703.

Y. Liu, D. Tian, A.N. Biswas, Z. Xie, S. Hwang, J.H. Lee\*, H. Meng\* and J.G. Chen\*, “Transition Metal Nitrides as Promising Catalyst Supports for Tuning CO/H2 Syngas Production from Electrochemical CO2 Reduction”, *Angewandte Chemie International Edition*, 59 (2020) 11345.

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X. Jiang, X. Nie\*, X. Guo\*, C. Song\* and J.G. Chen\*, “Recent Advances in Carbon Dioxide Hydrogenation to Methanol via Heterogeneous Catalysis”, *Chemical Reviews*, 120 (2020) 7984.

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J.H. Lee, S. Kattel,Z. Jiang,Z. Xie, S. Yao, B.M. Tackett, W. Xu, N.S. Marinkovic, and J.G. Chen\* “Tuning the Activity and Selectivity of Electroreduction of CO2 to Synthesis Gas using Bimetallic Catalysts”, *Nature Communications*, 10 (2019) 3724.

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