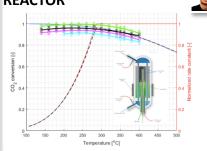


# LMER Laboratory of Materials for Renewable Energy

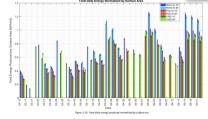
### THESIS

### INVESTIGATION AND OPTI-**MIZATION OF THE PERFORM-**ANCE OF A METHANATION REACTOR



"Investigation **VERNAY** and Vincent optimization of the performance of a methanation reactor", Master thesis, LMER, EPFL, Spring 2017. Supervision: Prof. Andreas Züttel, Dr. Noris Gallandat, Robin Mutschler. Defence 7. 7. 2017

## SOLAR ENERGY TO SYNTHETIC HYDROCARBONS CONVERSION PERFORMANCE EVALUATION OF A SMALL-SCALE DEMONSTRATOR

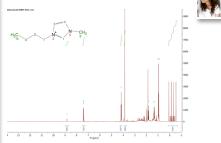


Lukas SMITH "Solar Energy to Synthetic Hydrocarbons Conversion - Performance Evaluation of a Small-Scale Demonstrator", Master Thesis, LMER, EPFL, Spring, 2018. Supervisors: Prof. Dr. Andreas Züttel, Dr. Noris Gallandat. Defence 9. 7. 2018

# STABILITY OF SIZE-SELECTED CU-**BASED MODEL CATALYSTS FOR** CO<sub>2</sub> HYDRO-GENATION

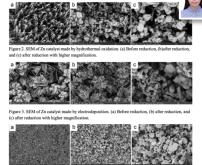
Alexandre BORSAY "Stability of size-selected Cu-based model catalysts for CO<sub>2</sub> hydrogenation", Master Thesis, LMER, EPFL, Spring, 2019. Supervision:Andreas Züttel, Wen Luo, Mo Li: Defence 9. 7. 2019

### STUDY OF THE INFLUENCE OF THE CATION ON THE STABILITY OF BOROHYDRIDES



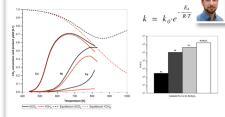
Asma MANSOURI, "Study of the influence of the cation on the stability and desorption properties of borohydrides materials for Hydrogen Storage", Master Semester Thesis, LMER, EPFL, 2018. Supervisors: Prof. Dr. Andreas Züttel, Prof. Hans Hagemann, UNIGE, Completed: 29. 8. 2018.

## SYNTHESIS OF NANO-STRUCTURED ZN CATALYSTS FOR CO2 ELECTROREDUCTION



Qin ZHANG, "Synthesis of nano-structured Zn Catalysts for CO2 electroreduction", Master Semester Thesis, LMER, EPFL, 2019. Supervisors: Prof. Dr. Andreas Züttel, Dr. Wen Luo, Jie Zhang, Completed: 10. 6. 2019

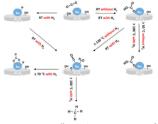
### INVESTIGATION OF THE HETERO-GENEOUSLY CATALYSED GAS PHASE CO<sub>2</sub> HYDROGENATION REACTION



MUTSCHLER, Robin Tobias Andreas "Investigation of the heterogeneously catalysed gas phase CO<sub>2</sub> hydrogenation reaction: Development of analysis methods and reaction analysis on basic catalysts", PhD Thesis, LMER, EPFL, 2015 - 2019. Supervisors: Prof. Dr. Andreas Züttel, Dr. Emanuele Moioli. Defence: 6. 9. 2019.

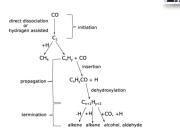
### MECHANISMS OF THE HETERO-**GENEOUSLY CATALYZED** REACTION OF CO2 HYDRO-





ZHAO, "Mechanisms Heterogeneously Catalyzed Reac-tion of CO<sub>2</sub> Hydrogenation on Transition Metal Surfaces", PhD Thesis, LMER, EPFL, 2016 - 2020. Supervisors: Prof. Dr. Andreas Züttel. Defense: 13. 3. 2020.

### LITERATURE REVIEW ON THE HYDROCARBON AND HIGHER ALCOHOL SYNTHESIS FROM SYNGAS.



Cédric TERRIER, "Literature Review on the Hydrocarbon and Higher Alcohol Synthesis from Syngas", Master Semester Project Thesis, LMER, EPFL, 2. 2020 – 6. 2020. Supervisors: Alexandre Borsay, Director: Prof. Dr. Andreas Züttel. Submitted: 3. 6. 2020.