

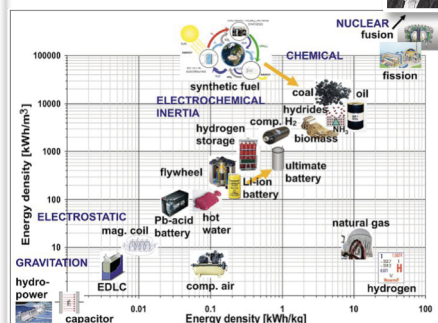
DEGRADATION MECHANISM IN LANI₅-BASED ELECTRODES



SEM	Initial	30 cycles	50% cap. loss
LaNi ₅ Co ₂ Al _{0.1}			
(La+Mm)Ni _{4.3} Co _{0.3} Al _{0.35} Mn _{0.05} Zr _{0.05}			
MmNi _{4.3} Al _{0.2} Mn _{0.5}			
LaNi ₅ Al _{0.5}			

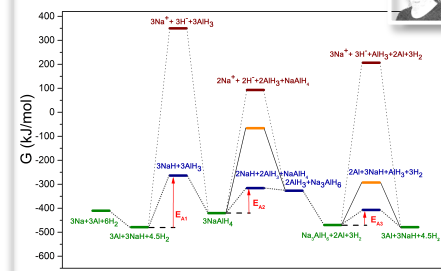
Spodyaryk M., Shcherbakova L., Sameljuk A., Wichser A., Zakaznova-Herzog V., Holzer, M., Braem, B., Khyzhun, O., Mauron P., Remhof A., Solonin Y., Züttel A., «Description of the capacity degradation mechanism in LaNi₅-based alloy electrodes», J. of Alloys and Compounds 621 (2015), pp. 225-231

STORAGE OF RENEWABLE ENERGY BY REDUCTION OF CO₂ WITH HYDROGEN



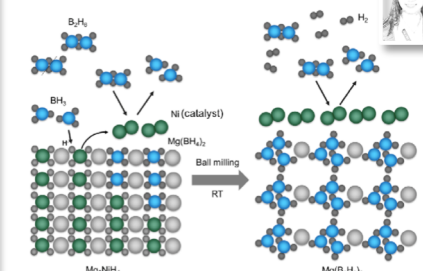
A. Züttel, Ph. Mauron, S. Kato, E. Callini, M. Holzer and J. Huang, «Storage of Renewable Energy by Reduction of CO₂ with Hydrogen», CHIMIA 69:5 (2015), pp. 264–268

CATALYZED HYDROGEN SORPTION MECHANISM IN ALKALI ALANATES



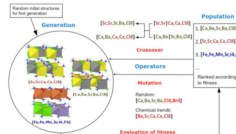
Zueleyha Oezlem Kocabas Atakli, Elsa Callini, Shunsuke Kato, Philippe Mauron, Shin-ichi Orimo, Andreas Züttel, «The catalyzed hydrogen sorption mechanism in alkali alanates», Phys. Chem. Chem. Phys., 17 (2015), 20932

A NOVEL METHOD FOR THE SYNTHESIS OF SOLVENT-FREE Mg(B₃H₈)₂



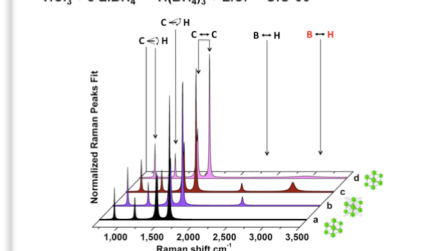
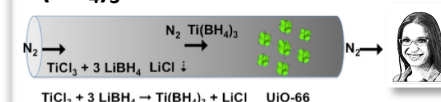
Jianmei Huang, Yigang Yan, Arndt Remhof, Yucheng Zhang, Daniel Rentsch, Yuen S. Au, Petra E. de Jongh, Fermin Cuevas, Liuzhang Ouyang, Min Zhua and Andreas Züttel, "A novel method for the synthesis of solvent-free Mg(B₃H₈)₂", Dalton Trans., 45, (2016), pp. 3687.

A REVIEW OF COST ACTION MP1103



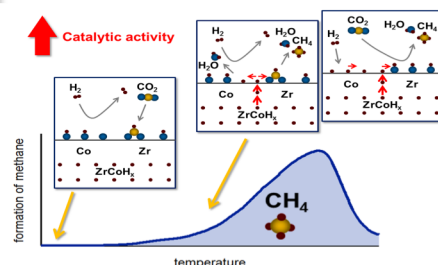
E. Callini, K.-F. Aguey-Zinsou, R. Ahuja, J. R. Ares, S. Bals, N. Biliškov, S. Chakraborty, G. Charalampo-poulou, A.-L. Chaudhary, F. Cuevas, B. Dam, P. de Jongh, M. Dornheim, Y. Filinchuk, J. Grbović Novaković, M. Hirscher, T. R. Jensen, P. B. Jensen, N. Novaković, Q. Laib, F. Leardini, D. M. Gattia, L. Pasquini, T. Steriotis, S. Turner, T. Vegge, A. Züttel, A. Montone, "Nanostructured materials for solid-state hydrogen storage: A review of the achievement of COST Action MP1103", International Journal of Hydrogen Energy Volume 41, Issue 32, 24 August 2016, Pages 14404–14428.

STABILIZATION OF VOLATILE Ti(BH₄)₃ BY NANO-CONFINEMENT



E. Callini, P. Á. Szilágyi, M. Paskevicius, N. P. Stadie, J. Réhault, C. E. Buckley, A. Borgschulte and A. Züttel, "Stabilization of volatile Ti(BH₄)₃ by nano-confinement in a metal-organic framework", Chemical Science 7 (2016), pp. 666 – 672.

CO₂ REDUCTION MECHANISM ON METAL HYDRIDES



S. Kato, S. K. Matam, P. Kerger, L. Bernard, C. Battaglia, D. Vogel, M. Rohwerder, A. Züttel, „The Origin of the Catalytic Activity of a Metal Hydride in CO₂ Reduction“, Angew. Chem. Int. Ed. Engl. 55:20 (2016), pp. 6028-32. doi: 10.1002/anie.201601402

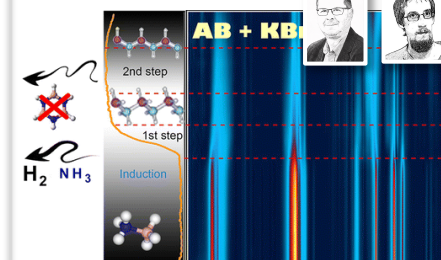
COMPLEX AND LIQUID HYDRIDES FOR ENERGY STORAGE



IEA Task 32: Hydrogen-based energy storage

Elsa Callini, Zueleyha Özlem Kocabas Atakli, Bjørn C. Hauback, Shin-ichi Orimo, Craig Jensen, Martin Dornheim, David Grant, Young Whan Cho, Ping Chen, Björgvin Hjörvarsson, Petra de Jongh, Claudia Weidenthaler, Marcello Baricco, Mark Paskevicius, Torben R. Jensen, Mark E. Bowden, Thomas S. Autrey, Andreas Züttel Appl. Phys. A 122:353 (2016). doi:10.1007/s00339-016-9881-5

HIGH INFLUENCE OF KBr ON THE DECOMPOSITION OF BH₃NH₃



Nikola Biliskov, Danijela Vojta, Laszlo Kotai, Imre Miklos Szilagy, David Hunyadi, Tibor Pasinszki, Sandra Flinec Grgac, Andreas Borgschulte, Andreas Züttel, "High Influence of Potassium Bromide on Thermal Decomposition of Ammonia Borane", J. Physical Chemistry C 120:44 (2016), pp. 25276 - 25288