

Johann Lüder is an assistant professor at the National Sun Yat-Sen University in Kaohsiung, Taiwan. Currently, he investigates molecular-based design strategies to increase the performance of organic electrodes for multivalent batteries by means of ab initio calculations.

He was a Research Fellow at the Department of Mechanical Engineering, National University of Singapore. His research interests concerned the atomistic understanding of advanced functional materials for which he employs state-of-the-art computational methods.

He received his PhD from Uppsala University, Sweden, before joining NUS. At Uppsala University, he specialized in ab initio spectroscopy calculation on small organic and metal-organic molecules in different environments such as in gas phase and on substrates, e.g., Au(111), Cu(111) or Si(100)2x1 and XPS, NEXAFS, XAS, PES and exciton simulations were used to gain detailed insights into their electronic structures, which is fundamental to understand possible advanced applications, e.g., in molecular switches, junction or as gas detectors.