Prof. Soonho Kwon

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Dr. Soonho Kwon is an Assistant Professor in the Department of Materials Science and Engineering at Pohang University of Science and Technology (POSTECH), Republic of Korea. His research focuses on computational materials science and electrochemistry, with particular emphasis on understanding and designing advanced electrocatalysts for sustainable energy applications.

He received his B.S. in Materials Science and Engineering from Sungkyunkwan University (SKKU) and Ph.D. from the Korea Advanced Institute of Science and Technology (KAIST) in 2018 under the supervision of Prof. Hyuck Mo Lee. He conducted postdoctoral research at KAIST before joining the California Institute of Technology (Caltech) as a Postdoctoral Scholar and Scientific Researcher in the Materials and Process Simulation Center (MSC), working with Prof. William A. Goddard III. At Caltech, he contributed to bridging theoretical simulations with experimental observations, particularly in electrochemical interfaces and reaction mechanisms.

Dr. Kwon's research integrates quantum mechanical simulations, molecular dynamics, and multiscale modeling to uncover fundamental mechanisms governing electrochemical reactions. His work spans key energy-related processes, including CO_2 reduction(CO_2RR), oxygen evolution reaction (OER), hydrogen evolution reaction (HER), and photocatalysis. He has authored over 38 peer-reviewed journal articles, including 21 co-first-authored publications.