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Dr. Jihoon Seo is an Associate Professor in the Department of Advanced Materials and Semiconductor Engineering at Hanyang University ERICA, Republic of Korea. Before joining Hanyang University, he served as an Assistant Professor of Chemical and Biomolecular Engineering at Clarkson University, USA, where he led research on chemical mechanical planarization (CMP) and post-CMP cleaning technologies for semiconductor manufacturing.

His research focuses on the chemical, mechanical, and interfacial phenomena governing CMP and semiconductor cleaning processes. His work includes CMP slurry and cleaning chemistry, nanoparticle adhesion and removal, electrochemical interactions, surface contamination, and real-time characterization of wafer-particle and brush-surface interactions. He also develops sustainable semiconductor manufacturing approaches using environmentally benign additives, efficient cleaning formulations, and strategies to reduce chemical consumption and process waste.

Dr. Seo actively collaborates with semiconductor manufacturers, equipment suppliers, and materials companies to address challenges involving advanced materials, defect control, and cleaning efficiency. He also contributes to the international CMP community as an organizer and session chair of the C.A.M.P. CMP Symposium. He served as Lead Guest Editor for a CMP focus issue of the ECS Journal of Solid State Science and Technology and has contributed to the Semiconductor Research Corporation's Microelectronic and Advanced Packaging Technologies roadmap committee.