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CONTACT

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ACADEMIC CAREER

2021 - Associate Professor, Chemical Engineering, Hongik University
2017 - 2021 Assistant Professor, Chemical Engineering, Hongik University
2015 - 2017 Assistant Professor, Chemistry, Chungnam National University
2014 - 2015 Postdoctoral Fellow, Chemistry & Chemical Biology, Harvard University
- Advisors: Prof. Cynthia M. Friend, Prof. Robert J. Madix
2014 Ph.D. in Chemical Engineering, Stanford University
- Advisor: Prof. Stacey F. Bent
2009 B.S. in Chemical and Biological Engineering, Seoul National University

RESEARCH INTERESTS

- Fundamental surface chemical phenomena
- Chemistry of atomic layer deposition (ALD)
- Chemistry of atomic layer etching (ALE)
- *in situ* analysis of reacting surfaces
- Low-dimensional nanomaterials

REPRESENTATIVE PUBLICATIONS

- Chemical mechanism of formation of the two-dimensional electron gas at the Al₂O₃/TiO₂ interface by atomic layer deposition, *Materials Today Advances*, 2021
- Inherently area-selective atomic layer deposition of SiO₂ thin films to confer oxide versus nitride selectivity, *Advanced Functional Materials*, 2021
- Atomic layer deposition of Ru for replacing Cu-interconnects, *Chemistry of Materials*, 2021
- Evaluation of silicon tetrahalide precursors for low-temperature thermal atomic layer deposition of silicon nitride, *Applied Surface Science*, 2021
- Effects of Al precursors on deposition selectivity of atomic layer deposition of Al₂O₃ using ethanethiol inhibitor, *Chemistry of Materials*, 2020
- Low-temperature atomic layer deposition of highly conformal tin nitride thin films for energy storage devices, *ACS Applied Materials & Interfaces*, 2019