Associate Professor SONG Juha

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Dr. Juha Song is an Associate Professor in the School of Chemical and Biomedical Engineering at Nanyang Technological University (NTU), Singapore, and an active member of the Singapore Centre for 3D Printing (SC3DP). She also serves as the school representative to the Robotics Research Centre (RRC). Dr. Song received her PhD in Materials Science and Engineering from the Massachusetts Institute of Technology (MIT) in 2011, where her work focused on bioinspired materials and biomechanics, elucidating nanoscale design principles in natural exoskeletal systems. She subsequently conducted postdoctoral research at Seoul National University, developing hybrid biomaterials for medical implant applications in close collaboration with industry. Since 2020, Dr. Song's research has centered on bionanotechnology, bioinspired composite materials, and advanced additive manufacturing, with particular emphasis on nano-to-macro structure–property relationships, biological micro- and nanostructures, and functional soft and hybrid materials. Her group has reported influential work on pollen-derived microgels, biomimetic soft matter, and multi-material 3D printing, published in leading journals such as Advanced Functional Materials, Nature Communications, and Biomaterials. Her current projects explore nanostructured biomaterials for biomedical devices, AI-assisted material design, and high-resolution 3D fabrication of functional composites, bridging fundamental nanomaterials science with translational engineering applications.