

Dr. Hyo-Jick Choi Biography

Dr. Choi is an Assistant Professor in the Department of Chemical & Materials Engineering at the University of Alberta and runs a sustainable engineering and drug delivery design (SEED) lab investigating new materials directed towards health and environmental applications. He has amassed knowledge in different disciplines of science as the result of his diverse background. He received his B.S. and M.S. degrees in Ceramic Engineering from Yonsei University in Korea. He continued his Ph.D. studies in Biomedical Engineering at UCLA and at the University of Cincinnati. He then conducted postdoctoral research in the School of Chemical and Biomolecular Engineering at Georgia Institute of Technology. His research resulted in generation of two start-up companies.

Dr. Choi has made influential scientific contributions in Materials Science and Biotechnology by developing, 1) an innovative smart polymer-based oral drug/vaccine delivery carrier, 2) a minimally invasive transdermal drug delivery method using solid microneedles, and 3) universal and reusable airborne pathogen deactivation methods (antibacterial/antiviral surgical masks and respirators) with no risk of cross contamination. Dr. Choi is an Editorial Board Member of Scientific Reports.

He was chosen as the Researcher of the Month for June 2017 by the Canadians for Health Research for his efforts in the development of virus deactivation system against pandemic/epidemic diseases and solid oral vaccines. The overall goal of his research is to develop nano-scale systems with precisely tailored materials by using interdisciplinary approach and focus on their commercial applications in energy, environment, and global health problems.