

# K.-C. Kenneth Park | Surface Engineering

#### **Research Summary**

Developing functional surfaces to capture and release multiscale particles in fluids for a sustainable future:

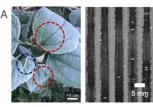
- 1. Thermal-fluids engineering (particle-laden flow, phase change heat transfer, mass diffusion, and droplet/bubble/particle-surface interaction)
- 2. Multi-length scale surface fabrication (nano, micro, and millimeter scale manufacturing)
- 3. Bio-inspired surface engineering for a sustainable future (clean water, energy-saving, and environmental pollution/medical hazard reduction surface designs)

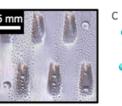
#### **Notable Research Papers**

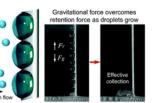
- Frost-free zone on macrotextured surfaces (PNAS, 2020, Figure A)
- Condensation on slippery asymmetric bumps (Nature, 2016, Figure B)
- <u>Onset time of fog collection</u> (Soft Matter (Back Cover), 2019, Figure C)
- Full list

## Popular Press

- May the Fog Be with You: Ken Park seeks to unlock the potential of fog, smog harvesting through bio-inspired surface engineering
- Leaf-inspired Surface Prevents Frost Formation
- <u>An Unlikely Ally in the Fight Against Plastic Pollution</u>









## Assistant Professor of Mechanical Engineering

McCormick School of Engineering

## **Faculty Overview**

- Bio-inspired surface engineering and interfacial phenomena research
- Notable Awards: IChemE Global Award (2016); Harvard Postdoctoral Awards for Professional Development (2016); MIT Wunsch Foundation Silent Hoist and Crane Award for Outstanding Graduate Research (2013)

## **Intellectual Property Portfolio**

Patents (1 licensed; 6 issued; 17 patent applications)

# **Current Areas of Industry Collaboration**

Functional surface development, thermal-fluids engineering, water-energy nexus

## The Park Group