Chan Jin Park

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Education

M.S. & Ph.D. in Mechanical Engineering
Seoul National University, Seoul, South Korea — September 2016 - August 2022
Supervisor: Prof. Ho-Young Kim

B.S. in Naval Architecture and Ocean Engineering
Seoul National University, Seoul, South Korea — March 2012 - August 2016
Supervisor: Prof. Shin Hyung Rhee

Publications

Surface-morphology-induced oriented growth in natural and artificial tip-growing system
C. J. Park, J. Kim, Y. W. Lim, and H.-Y. Kim
in preparation

Plant cell-like tropic tip-growing polymer precipitate with structurally embedded multi-stimuli sensing ability
C. J. Park, J. Ha, H.-R. Lee, K. Park, J.-Y. Sun, and H.-Y. Kim
accepted, *Proceedings of the National Academy of Sciences* (2022)

Coalescence of oil drops and films on micropillared substrates enabled by enhanced water drainage through pillar gaps
C. J. Park, J. Ha, J. H. Lee, and H.-Y. Kim
Soft Matter **17**, 5888-5896 (2021)

Patents

Manufacturing method of growth body and the growth body manufactured thereby
H.-Y. Kim, **C. J. Park**
KR 10-2412426 (2020)

Oil water separator and oil recovery device including the same
H. Park, H.-Y. Kim, L. Piao, **C. J. Park**
KR 10-2044150 (2019)

Coalescer and method for separating oil droplet from water using the coalescer
H.-Y. Kim, **C. J. Park**
KR 10-2427721 (2019)

Oil recovery device
H. Park, H.-Y. Kim, N. Kim, L. Piao, **C. J. Park**
KR 10-1857434 (2018)

Resulting device of the above three patents (KR 10-1857434, KR 10-2427721, KR 10-2044150) was selected as one of the 'Top 10 Mechanical Technologies of 2020' by KFMES

Honors and Awards

Gold Prize, The 28th Samsung Humantech Paper Award - January 2022
Awarded with prize money of KRW 10,000,000 (∼USD 8,000)

Best Paper Award, Emerging Technologies in Mechanical Engineering 2018 - August 2018

Finalist, ASME Innovative Design Simulation Challenges 2016 - August 2016
Participated in the finals at the ASME IDETC/CIE/AM3D 2016

Conference Presentations (selected)

Surface-morphology-induced oriented growth in natural and artificial tip-growing systems
75th Annual Meeting of the APS Division of Fluid Dynamics, Indianapolis, Indiana, USA (2022)

A multi-stimuli responsive tropic tip-growing liquid robot
74th Annual Meeting of the APS Division of Fluid Dynamics, Phoenix, Arizona, USA (2021)

Coalescence of oil drops and films on microtextured substrates in water
2021 micro Flow and Interfacial Phenomena (μFIP) Conference, Virtual (2021)

Enhancing coalescence of water-immersed oil drops with oil films via microtexturing of solid surfaces
71th Annual Meeting of the APS Division of Fluid Dynamics, Atlanta, Georgia, USA (2018)

Drop-film collision dynamics within an immiscible fluid
Emerging Technologies in Mechanical Engineering 2018, Jeju island, South Korea (2018)

Research Projects

Research center for metamorphing mechanical systems,
National Research Foundation of Korea — June 2018 - present

Development of charged liquid metal drop train-generating device,
Samsung Electronics — March 2019 - December 2020

Development of autonomous oil recovery device based on nanostructured structures,
Korea Institute of Marine Science & Technology Promotion May 2016 - December 2020
Nano/bio-mechanical system technology using micro/nanoscale porous flow control,
National Research Foundation of Korea March 2016 - May 2016

I have participated in the above projects as a graduate research assistant under the supervision of principal investigator, Prof. Ho-Young Kim.

Teaching experiences

Teaching assistant, Fluid Mechanics
Seoul National University September 2017 - December 2017
Teaching assitant, Mechanics of Soft Matter
Seoul National University March 2017 - June 2017

Hardware Skills

- Soft lithography
- Flow visualization
- Chemical Vapor Deposition
- High-speed imaging
- Atomic Force Microscopy
- Scanning Electron Microscopy

Professional References

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