Curriculum Vitae – Dan Daniel

Personal Particulars

Dan Daniel
Assistant Professor
King Abdullah University of Science and Technology (KAUST)
Thuwal 23955, Saudi Arabia
danield@kaust.edu.sa
https://dropletlab.science/
Google Scholar

Areas of specialization

fluid mechanics, wetting and adhesion, atomic force microscopy, functional/superhydrophobic/lubricated surfaces, soft matter physics

Education

MSc/Ph.D in Applied Physics, 2011-2017
University of Harvard (USA)

BA in Physics (Hons, 1st Class), 2007-2010
Cambridge University (UK)

Employment

Assistant Professor, KAUST (Saudi Arabia), 2022-present

Group Leader, Institute of Materials Research and Engineering (Singapore), 2020-2022

Research Scientist, Institute of Materials Research and Engineering (Singapore), 2017-2020

Research Engineer, Institute of Microelectronics (Singapore), 2010-2011

Awards/Grants

International Association of Colloid and Interface Scientist (IACIS)
Emerging Investigator Award 2022

$\sim$ 2M USD of competitive research grants

Selected to attend the Lindau Nobel Laureate Meeting 2019

A*STAR NSS(BS/PhD) scholarship, 2007–2017

Teaching/Supervision

Teaching Assistant for AP235 (Harvard University), 2012–2013:
Graduate class in “Chemistry in Materials Science and Engineering"

Supervised 3 undergraduate students from University of Waterloo (Canada),
1 undergraduate student from Nanyang Technological University (Singapore),
1 master student from the University of Twente,
1 PhD student from the Nanyang Technological University (Singapore) and
1 PhD student from Oxford University
Led to 5 publications in *Nat. Phys.*, *Phys. Rev. Lett.*, *Phys. Rev. X*, *Comm. Phys.*, and *ACS Nano*.

Selected Publications

J. Cui, D. Daniel, A. Grinthal, K. Lin and J. Aizenberg, "Dynamic polymer systems with self-regulated secretion for the control of surface properties and material healing." *Nat. Mat.* **14**, 790–795 (2015).

S. Sunny, G. Cheng, D. Daniel, P. Lo, S. Ochoa, C. Howell, N. Vogel, A. Majid and J. Aizenberg, "Transparent antifouling material for improved operative field visibility in endoscopy." *Proc. Natl. Acad. Sci. USA* **113**, 11676–11681 (2016).

D. Daniel, J.V.I. Timonen, R. Li, S.J. Velling, and J. Aizenberg, "Oleoplaning droplets on lubricated surfaces." *Nat. Phys.* **13**, 1020–1025 (2017).

D. Daniel*, X. Yao and J. Aizenberg*, "Stable liquid jets bouncing off soft gels." *Phys. Rev. Lett.* **120**, 028006 (2018) ***co-corresponding author**

D. Daniel*, J.V.I. Timonen, R. Li, S.J. Velling, M.J. Kreder, A. Tetreault and J. Aizenberg* "Origins of extreme liquid repellency on structured, flat, and lubricated surfaces" *Phys. Rev. Lett.*. **120**, 244503 (2018) ***co-corresponding author**

M.J. Kreder*, D. Daniel*, A. Tetreault, Z. Cao, B. Lemaire, J.V.I Timonen and J. Aizenberg "Film dynamics and lubricant depletion by droplets moving on lubricated surfaces" *Phys. Rev. X.* **8**, 031053 (2018) ***contributes equally**

J. Jiang, J. Gao, H. Zhang, W. He, J. Zhang, D. Daniel and X. Yao, Directional Pumping of Water and Oil Microdroplets on Slippery Surface, *Proc. Natl. Acad. Sci. USA* (2019).

D. Daniel*, A. Chia, L. Moh, X.Q. Koh, R.R. Liu, X. Zhang, and N. Tomczak*, Hydration lubrication of polyzwitterionic brushes leads to nearly adhesion- and friction-free droplet motion, *Comm. Phys.* (2019). ***co-corresponding author**

D. Daniel*, C. L. Lay, A. Sng, I. Y. Phang, X. Y. Ling, and N. Tomczak, Mapping micron-scale wetting properties of superhydrophobic surfaces, *Proc. Natl. Acad. Sci. USA* (2019).
***corresponding author**

S. Basu, B. M. Hanh, J. I. Chua, D. Daniel, M. H. Ismail, M. Marchioro, ... and A. Miserez, Green biolubricant infused slippery surfaces to combat marine biofouling. *J. Colloid Interface Sci.* (2020).

h-index: 14, **citation count** $>$ 1400