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Education

09/2003–01/2010 **MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)** MA, USA
Ph.D. in Materials Science and Engineering; Minor: Biophysics
Advisor: Prof. Yoel Fink (National Academy of Engineering, 美国工程院院士)

FUDAN UNIVERSITY

Shanghai, China

09/2000–06/2003 M.S. in Physics

09/1996–06/2000 B.S. in Physics, summa cum laude

Advisor: Prof. Ruibao Tao (陶瑞宝院士) and Prof. Xiaofeng Jin (金晓峰教授)

Employment

2015/09-present **Fudan University** Professor, Department of Aeronautics and Astronautics

10/2013-08/2015 **Harvard University** Postdoctoral, School of Engineering and Applied Sciences

Advisor: Prof. Shmuel Rubinstein

02/2010-09/2013 **MIT** Postdoctoral, Department of Chemical Engineering

Advisor: Prof. Martin Bazant (National Academy of Engineering, 美国工程院院士)

Awards

Gilbert Y Chin Fellowship for promising graduate students, MIT (2003).

Selected Publications

1. M. Hu, F. Wang*, Y. Q. Li, L. Chen, W. N. Wu, P. Huo, **Daosheng Deng***, 3D periodic orbiting of a photothermal bubble, **Phys. Rev. Lett.** 134, 104004 (2025).
2. M. Hu, Y. Q. Li, L. Chen, W. N. Wu, P. Huo, X. Gu, F. Wang*, **Daosheng Deng***, A hovering bubble with a spontaneous horizontal oscillation, **Proc. Natl. Acad. Sci.** 121, e2413880121 (2024).
3. F. Wang, L. Chen, Y. Q. Li, P. Huo, X. Gu, M. Hu, **Daosheng Deng***, Self-lifting droplet driven by the solidification-induced solutal Marangoni flow, **Phys. Rev. Lett.** 132, 014002 (2024).
4. W. Esposito, L. Martin-Monier, P. Piveteau, B. R. Xu, **Daosheng Deng***, F. Sorin*, Controlled filamentation instability as a scalable fabrication approach to flexible metamaterials, **Nature Communications** 13, 6154 (2022).
5. M. Hu*, F. Wang, L. Chen, P. Huo, Y. Q. Li, G. Xi, K. L. Chong, **Daosheng Deng***, Near-infrared-laser-navigated dancing bubble within water via a thermally conductive interface, **Nature Communications** 13, 5749 (2022).
6. **D. S. Deng**, W. Aouad, W. Braff, S. Schlumpberger, M. Suss, M. Bazant, Water purification by shock electrodialysis: deionization, filtration, separation, and disinfection. **Desalination** 357, 77 (2015).
 - MIT Tech Review: [New Desalination Technique Also Cleans and Disinfects Water](#);
 - featured at [physics today](#), among many others.
7. J. Kaufman, G. Tao, S. Shabahang, E. Banaei, **Daosheng Deng**, X. D. Liang, S. G. Johnson, Y. Fink and A. F. Abouraddy, Structured spheres generated by an in-fiber fluid instability. **Nature** 487, 463 (2012).
 - News & Views, “Materials science: The abilities of instabilities.” **Nature** 487, 440 (2012).
 - MIT news: [Dripping faucets inspire new way of creating structured particles](#); [PhysOrg](#).