Yizhe Zhang, Ph.D.

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Education

Ph.D. (May 2015) in Chemical Physics, Department of Chemistry and Chemical Biology, Harvard University

B.S. (July 2007) in Applied Physics, Department of Physics, University of Science & Technology of China

Professional Experiences

July 2016 - present: Postdoctoral scholar (Advisor: Prof. Amy E. Herr)
California Institute for Quantitative Biosciences
Department of Bioengineering, University of California, Berkeley

Research project: Developing high-selectivity cytometry tools for measuring signaling activation in single cells

June 2015 - June 2016: Postdoctoral fellow (Advisor: Prof. David A. Weitz)
John A. Paulson School of Engineering and Applied Sciences, Harvard University

Research project: Continuing the Ph.D. projects on synthesis and properties of soft materials using microfluidic techniques

April 2009 - May 2015: Graduate student (Advisor: Prof. David A. Weitz)
School of Engineering and Applied Sciences,
Department of Physics, Harvard University

Research project 1: Ultrahigh-throughput screening of restriction enzyme using microfluidic sorter based on SOS response in *E. coli* (*Collaborator: New England Biolabs, Inc.*)

Research project 2: Label-free single-molecule detection of DNA using *in vitro* N-hybrid system in sub-picoliter microfluidic drops (*Collaborator: New England Biolabs, Inc.*)

Research project 3: Microfluidic pico-injection-based synthesis of cell-laden alginate microgels with tunable compositions (*Collaborator: Mooney lab, Harvard University*)

July 2010 - August 2010: Summer student (Advisor: Prof. Gary Ruvkun)
Marine Biological Laboratory

Research project: Genetic studies of the stress resistance and aging in *C. elegans*

January 2008 - March 2009: Graduate student (Advisor: Prof. Charles M. Lieber)
Department of Chemistry and Chemical Biology, Harvard University

Research project: Developing nanopore-integrated nanowire-FET devices for ultra-fast DNA sequencing

January 2006 - June 2007: Undergraduate student (Advisor: Prof. Yuheng Zhang)
National High Magnetic Field Lab, University of Science & Technology of China

Research project: Studying charge ordering in Titanium-doped perovskite-structure materials

Publications

Yizhe Zhang, Yu Zheng, Jeremy Agresti, Richard Roberts, David A. Weitz "*High-throughput direct screening of restriction endonuclease using microfluidic fluorescence-activated drop sorter based on SOS response in E.coli*" in preparation

Yizhe Zhang, Angelo Mao, David J. Mooney, David A. Weitz "*Synthesis of cell-laden alginate microgels with tunable compositions based on microfluidic pico-injection technique*" in preparation

Yizhe Zhang, Linas Mazutis, Shaorong Chong, David A. Weitz "*PCR-free, label-free detection of sequence-specific DNAs with single-molecule sensitivity using in-vitro N-hybrid system in microfluidic drops*" in preparation

Li Pi, Ehua Fan, **Yizhe Zhang**, Jinxiu Ma, Shun Tan, Yuheng Zhang "*The suppression of charge ordering in* $Pr_{0.5}Ca_{0.5}Mn_{1-x}Ti_xO_3$ *and* $Pr_{0.5-0.5x}Ca_{0.5+0.5x}Mn_{1-x}Ti_xO_3$ *systems*" Journal of Magnetism and Magnetic Materials, 2007, 314, 87-92

Teaching Experiences

Spring 2010 Teaching Assistant for *Introduction to Physical Sciences*
(Instructors: Prof. Adam Cohen, Prof. Hongkun Park)

Spring 2009 Teaching Assistant for *Introduction to Physical Sciences*
(Instructors: Prof. James Anderson, Prof. Efthimios Kaxiras)

Honors & Awards

2010 Ellison Medical Foundation stipend for the MBL Course on Molecular Biology of Aging

2009 - 2010 Teaching Fellowship
Department of Chemistry and Chemical Biology, Harvard University

2008 Robert Karplus Prize Fellowship
Chemical Physics, Harvard University

2007 - 2008 Departmental Scholarship
Department of Chemistry and Chemical Biology, Harvard University

2007 Fieser Graduate Research Grant
Department of Chemistry and Chemical Biology, Harvard University

2005 - 2006 Outstanding Student Scholarship (2nd Prize)
University of Science & Technology of China

2004 - 2005 Outstanding Student Scholarship (1st Prize)
University of Science & Technology of China

2003 - 2004 Outstanding Student Scholarship (1st Prize)
University of Science & Technology of China

References

1. **Dr. David Weitz** (Ph.D. advisor):
   Mallinckrodt Professor of Physics and Applied Physics, Harvard University
   Director of the Materials Research Science and Engineering Center
   Co-Director of the BASF Advanced Research Initiative
   Member, Kavli Institute for Bionano Science & Technology

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   Cambridge, MA 02138
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2. **Dr. Ming Guo** (former colleague in Weitz lab):
   Assistant Professor, Department of Mechanical Engineering, Massachusetts Institute of Technology

   Room 3-455C, 77 Massachusetts Avenue
   Cambridge, Massachusetts 02139
   Phone: 617-324-0136
   Email: guom@mit.edu

3. **Dr. Yu Zheng** (collaborator):
   Founder, RGENE Inc.,

   QB3@953, 953 Indiana St.
   San Francisco, CA, 94107
   Email: yu.zhengyu@gmail.com