Curriculum Vitae

Dongran Han

Dept. of Systems Biology *Harvard Medical School*

Wyss Institute for Biologically Inspired Engineering *Harvard University*

Center for Life Science Boston *3 Blackfan Circle, Boston, MA 02115*

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EDUCATION

Arizona State University Tempe, AZ Ph.D in Chemistry 2009-2012

Dissertation: DNA Nanotechnology- Architectures Designed with DNA

Dissertation Advisor: Prof. Hao Yan

Peking University Beijing, P.R. China B.S. in Chemistry 2005-2009

EMPLOYMENT

Postdoctoral Fellow 06/13-

Wyss Institute

Harvard University Cambridge, MA

- Research (engineer programmable molecular systems based on nucleic acids).

Assistant Research Technologist 12/12-05/13

Biodesign Institute

Arizona State University Tempe, AZ

- Research (especially in invention and design of DNA/RNA nanostructures, DNA crystals; basic study and characterization of DNA in novel systems).
- Graduate student Mentor.
- Developed novel parallel helices DNA origami design strategy.

Teaching Assistant 08/12-12/12

Department of Chemistry and Biochemistry

Arizona State University Tempe, AZ

- Teaching Assistant for Elementary Biochemistry Lab.

Research Assistant 09/10-08/12

Department of Chemistry and Biochemistry

Arizona State University Tempe, AZ

- Developed reconfigurable topological DNA origami structures and got published in *Nature Nanotechnology*.
- Developed novel curved DNA origami design strategy and got published in *Science*.
- Developed novel DNA gridiron design strategy and got published in *Science*.
- Developed novel DNA crystal system.

AWARDS AND HONORS

Outstanding Graduate Student in Chemistry and Biochemistry Department	2012
Outstanding Graduate Research Assistant in Chemistry	2011
Student award in 2010 Foundation of Nanoscience conference	2010
Doctoral Recruiting Fellowship	2009-2010
University Graduate Fellowship	2009
National Fund for Fostering Talents of Basic Sciences	2007-2008
Fund of National Innovative Projects for Undergraduates	2007-2008
Advanced Individual of Social Work in Chemistry Department	2007
Scholarship for Advanced Individual at Peking University	2006
First prize of Olympic Intelligence Competition in Physics	2005

VOLUNTEER

Volunteer for Informal Science Communication Program 2010 spring

Informal Science Communication Program is provided by ASU's Center for Nanotechnology in Society and the National Nanotechnology Infrastructure Network in cooperation with the Arizona Science Center. Volunteers work with the public at Arizona Science Center twice a month in order to promote a broader understanding of science and technology.

PUBLICATIONS (* corresponding author)

9. **D. Han**, S. Jiang, A. Samanta, Y. Liu, H. Yan*, Unidirectional Scaffold Strand Arrangement in DNA Origami, ***Angew. Chem. Int. Ed.***, In Press. (2013)

8. **D. Han***, S. Pal, Y. Yang, S. Jiang, J. Nangreave, Y. Liu*, H. Yan*, DNA Gridiron Nanostructures Based on Four-Arm Junctions, ***Science***, 339, 1412–1415, (2013).

7. Y. Yang, **D. Han**, J. Nangreave, Y. Liu*, H. Yan*, DNA Origami with Double-Stranded DNA As a Unified Scaffold, ***ACS Nano***, 6, 8209-8215 (2012).

6. A. Pinheiro, **D. Han**, W. Shih*, H. Yan*, Challenges and opportunities for structural DNA

nanotechnology, ***Nature Nanotechnol.*** 10, 1038 (2011).

5. Z. Deng, **D. Han** and Y. Liu, Colloidal synthesis of metastable zinc-blende IV–VI SnS nanocrystals with tunable sizes, ***Nanoscale***, 3, 4346-4351 (2011).

4. C. R. Simmons, D. Schmitt, X. Wei, **D. Han**, A. M. Volosin, D. M Ladd, D. Seo, Y. Liu, H. Yan*, Size-Selective Incorporation of DNA Nanocages into Nanoporous Antimony-doped Tin Oxide Materials, ***ACS Nano***, 5, 6060–6068 (2011).

3. **D. Han*,** S. Pal, J. Nangreave, Z. Deng, Y. Liu*, H. Yan*, DNA Origami with Complex Curvatures in Three-dimensional Space, ***Science***, 332, 342–346 (2011).

-Featured as cover story of the April 15 issue of *Science*.
-This work was highlighted by National Science Foundation news release with video story. (http://www.nsf.gov/news/news_summ.jsp?cntn_id=119245&org=NSF&from=news)
-This work was highlighted by *Nature Methods*.

2. **D. Han**, S. Pal, Y. Liu*, H. Yan*, Folding and Cutting DNA into Reconfigurable Topological Nanostructures, ***Nature Nanotechnol.*** 5, 712–717 (2010).

-Featured as cover story of the October Volume 5 No 10 issue of *Nature Nanotechnology*.

1. J. Nangreave, **D. Han**, Y. Liu**,** H. Yan*, DNA Origami: A History and Current Perspective, ***Curr Opin Chem Biol*** 14, 608–615 (2010).

Academic Talks

4. "Novel design strategies in structural DNA nanotechnology", Harvard Medical School, Harvard University, May 8, 2013.

3. "Novel design strategies in structural DNA nanotechnology", Department of Computer Science, California Institute of Technology, March 14, 2013.

2. "Designer DNA Architectures for Nanotechnology", Institute of Theoretical Physics, Chinese Academy of Sciences, July 17, 2012.

1. "Designer DNA Architectures for Nanotechnology", College of Chemistry and Molecular Sciences, Wuhan University, July 6, 2012.

Conference Presentations

4. *DNA Origami Constructed From Parallel Helices*. Foundation of Nanoscience, Snowbird, Utah, 2013

3. *DNA Gridiron*. Foundation of Nanoscience, Snowbird, Utah, 2012

2. *Complex 3D DNA Nanostructures and DNA Dendrimer Polymerization*. Foundation of Nanoscience, Snowbird, Utah, 2011

1. *Toward Designing and Constructing Complex Curvatures of DNA Nanostructures in 3D Space*. Foundation of Nanoscience, Snowbird, Utah, 2010