

# Hailong Fan

## PERSONAL INFORMATION

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Assistant Professor at Institute for Chemical Reaction Design and Discovery (ICReDD), Hokkaido University

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## RESEARCH EXPERIENCE

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Assistant Professor, Hokkaido University, Prof. Jian Ping Gong's Group	2020.04-now
Postdoctoral fellow, Hokkaido University, Prof. Jian Ping Gong's Group	2017.09-2020.03
Research assistant, Renmin University of China, Prof. Zhaoxia Jin's Group	2008.09-2017.08

## EDUCATION

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<b>Renmin University of China</b> , Supervised by Prof. Zhaoxia Jin	
<b>Ph.D.</b> , Chemistry	2014.09-2017.06
Specialized in the interactions between polymers and polyphenols and their functional materials	
<b>M. E.</b> , Applied Chemistry	2011.09-2014.06
Thesis: "Fabrication and swelling behavior of polystyrene- <i>b</i> -poly(2-vinylpyridine) nanoparticles"	
<b>B. S.</b> , Chemistry	2007.09-2011.06
Thesis: "Applications of graphene/chitosan composite materials"	

## REFEREED JOURNAL PUBLICATIONS

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- H. L. Fan**, J. H. Wang, Z. Tao, J. C. Huang, P. Rao, T. Kurokawa, and J. P. Gong\* "Adjacent Cationic–Aromatic Sequences Yield Strong Electrostatic Adhesion of Hydrogels in Seawater" *Nature Communications*, 2019, 10, 5127 (top 50 most read *Nature Communications* articles in chemistry and materials sciences published in 2019)
- H. L. Fan**, J. H. Wang, Q. Y. Zhang, and Z. X. Jin\* "Tough, Swelling-Resistant, Self-Healing, and Adhesive Dual-Cross-Linked Hydrogels Based on Polymer–Tannic Acid Multiple Hydrogen Bonds" *Macromolecules*, 2018, 51, 1696 (*highly cited paper*)
- H. L. Fan**, J. H. Wang, Q. Y. Zhang, and Z. X. Jin\* "Tannic Acid-Based Multifunctional Hydrogels with Facile Adjustable Adhesion and Cohesion Contributed by Polyphenol Supramolecular Chemistry" *ACS Omega*, 2017, 2, 6668
- H. L. Fan**, L. Wang, X. D. Feng, Y. Z. Bu, D. C. Wu, and Z. X. Jin\* "Supramolecular Hydrogel Formation Based on Tannic Acid" *Macromolecules*, 2017, 50, 666
- H. L. Fan** and Z. X. Jin\* "Hierarchical porous polycaprolactone microspheres generated via a simple pathway combining nanoprecipitation and hydrolysis" *Chemical Communications* 2015, 51, 15114
- H. L. Fan**, X. Yu, Y. Liu, Z. J. Shi, H. H. Liu, Z. X. Nie, D. C. Wu and Z. X. Jin\* "Folic acid-polydopamine nanofibers show enhanced ordered-stacking via  $\pi$ - $\pi$  interactions" *Soft Matter* 2015, 11, 4621
- H. L. Fan** and Z. X. Jin\* "Selective Swelling of Block Copolymer Nanoparticles: Size, Nanostructure, and Composition" *Macromolecules* 2014, 47, 2674
- H. L. Fan** and Z. X. Jin\* "Freezing polystyrene-*b*-poly(2-vinylpyridine) micelle nanoparticles with different nanostructures and sizes" *Soft Matter* 2014, 10, 2848
- H. L. Fan**, L. L. Wang, K. K. Zhao, N. Li, Z. j. Shi, Z. G. Ge, and Z. X. Jin\* "Fabrication, Mechanical Properties, and Biocompatibility of Graphene-Reinforced Chitosan Composites" *Biomacromolecules* 2010, 11, 2345 (*Highly Cited Paper*)

10. Z. X. Jin\* and **H. L. Fan** “The modulation of melanin-like materials: methods, characterization and applications” *Polymer International* 2016, 65, 1258 mini-review
11. Z. X. Jin\* and **H. L. Fan** “Self-assembly of nanostructured block copolymer nanoparticles” *Soft Matter* 2014, 10, 9212 highlight article
12. Z. Tao, **H. L. Fan**, J. C. Huang, T. L. Sun, T. Kurokawa, and J. P. Gong\* “Fabrication of Tough Hydrogel Composites from Photoresponsive Polymers to Show Double-Network Effect” *ACS Applied Materials & Interfaces* 2019, 11, 40, 37139
13. X. Yu, **H. L. Fan**, L. Wang and Z. X. Jin\* “Formation of Polydopamine Nanofibers with the Aid of Folic Acid” *Angewandte Chemie International Edition* 2014, 53, 12600
14. P. L. Hou, **H. L. Fan**, and Z. X. Jin\* “Spiral and Mesoporous Block Polymer Nanofibers Generated in Confined Nanochannels” *Macromolecules* 2015, 48, 272
15. J. R. Feng, **H. L. Fan**, D. A. Zha, L. Wang, Z. X. Jin\*, “Characterizations of the Formation of Polydopamine-Coated Halloysite Nanotubes in Various pH Environments” *Langmuir* 2016, 32, 10377
16. W. C. Zheng, **H. L. Fan**, L. Wang and Z. X. Jin\* “Oxidative Self-Polymerization of Dopamine in an Acidic Environment” *Langmuir* 2015, 31, 11671
17. X. Yu, **H. L. Fan**, Y. Liu, Z. J. Shi and Z. X. Jin\* “Characterization of Carbonized Polydopamine Nanoparticles Suggests Ordered Supramolecular Structure of Polydopamine” *Langmuir* 2014, 30, 5497
18. L. L. Li, **H. L. Fan** and Z. X. Jin\* “Does halloysite behave like an inert carrier for doxorubicin?” *RSC Advances* 2016, 6, 54193
19. Z. H. Wang, F. Tang, **H. L. Fan**, L. Wang, and Z. X. Jin\* “Polydopamine generates hydroxyl free-radicals under UV-light illumination” *Langmuir* 2017, 33, 5938

#### AWARD AND SCHOLARSHIP

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- The First-class National Scholarship, 2015
- The First-class University Graduate Scholarship, 2011-2015
- The Excellent Youth Oral Presentation at the 5th Asian Symposium on Emulsion Polymerization and Functional Polymeric Microspheres, 2015
- The First Prize of the Twelfth “Challenge Cup” National Undergraduate Curricular Academic Science and Technology Work Competition, 2011
- The Second Prize of the Sixth “Challenge Cup” Capital Undergraduate Curricular Academic Science and Technology Work Competition, 2011
- Excellent University Bachelor Thesis Award, 2011
- Scientific Research Innovation Scholarship, 2010

#### CONFERENCE ATTENDANCE

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1. Poster presenter, The 20th RIES-HOKUDAI International Symposium, Dec. 2-3, **2019**, Sapporo, Japan
2. Poster presenter, The 2nd ICRéDD International Symposium, Nov. 27-29, **2019**, Sapporo, Japan
3. Poster presenter, the 10th Symposium of Polymer Molecular and Structure Characterization in China, Oct. 15-18, **2016**, Beijing, China
4. Oral presentation, The 5th Asian Symposium on Emulsion Polymerization and Functional Polymeric Microspheres (ASEPFPM), Oct. 24-27, **2015**, Suzhou, China
5. Poster presenter, National Symposium on Polymer Materials Science and Engineering, Oct. 12-16, **2014**, Chengdu, China
6. Poster presenter, National Conference on Polymer Academic Paper Report, Oct. 12-16, **2013**, Shanghai, China

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7. Poster presenter, the 4th Asian Symposium on Emulsion Polymerization and Functional Polymeric Microspheres (ASEPFPM), Dec. 11-14, **2011**, Hong Kong, China
  8. Poster presenter, National Conference on Polymer Academic Paper Report, Sept. 24-28, **2011**, Dalian, China