Dr. Haifeng (Frank) Ji

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RESEARCH INTEREST

- Structure-based molecular design for cancer and antibacterial drugs
- Antimicrobial property of plasma solutions
- Micro/nanocantilever chem/biosensors;
- Cancer detection and treatment;
- Advanced materials;
- Molecular electronics; Nanoassembly
- Combinatory chemistry; host-guest interaction; molecular recognition
- Organic and organometallic photochemistry; electron and energy transfer processes; conjugated polymers; fluorescent sensors.

EDUCATION

Postdoctoral, Life Science Division, Oak Ridge National Laboratory 2000
Postdoctoral, Dept. Chemistry, University of Florida, 1997
Ph.D., Chemistry, Chinese Academy of Sciences. 1996.

RESEARCH EXPERIENCE

2015-now	Professor, Dept. Chemistry, Drexel University
2008-2015	Associate professor, Dept. Chemistry, Drexel University
2006-2008	Associate professor, Dept. Chemistry and Institute for Micromanufacturing, Louisiana Tech University.
2004-present	EnvironMEMS Group Leader, Institute for Micromanufacturing
2003-present	Professor affiliated with Dept. Biomedical Engineer., La Tech Univ.
2000-2006	Assistant Professor, Dept. Chemistry and Institute for Micromanufacturing, Louisiana Tech University.
1998-2000	Postdoctoral Associate, Life Science Division, Oak Ridge National Laboratory
1997-1998	Postdoctoral Associate, Dept. Chemistry, University of Florida
1991-1996	Ph.D. Graduate Assistant, Chinese Academy of Science

Recognition in the press

Chemical and Engineering News, March 20, 2000, Science/Technology Concentrations.
http://pubs.acs.org/isubscribe/journals/cen/78/i12/7812scic.html.
http://www.latech.edu/newspublisher/news/news-archive-april-2002.shtml#1019585163
http://techtalk.latech.edu/archives/spring02/0418/output/n-20.htm
http://www.highbeam.com/doc/1G1-230347909.html

AFFILIATIONS

American Chemical Society, 1997-present
American Nano Society, 2012-present

PUBLICATIONS (>220 publications) with an H-index of 43

Submitted

1. Three-dimensional Modeling of Core-Structured Field Effect Transistor (CoreFET) Ketao Chen, Hai-Feng Ji
2. Bahrad A. Sokhansanj, Rohan Chandraghatgi, Gail L. Rosen, Hai-Feng Ji, Accelerating Computational Fragment-Based Drug Discovery through Evolutionary Optimization Informed by Ligand-Based Virtual Prescreening, in review.
3. Jerica Wilson, Bahrad A. Sokhansanj, Wei Chuen Chong, Rohan Chandraghatgi, Gail L. Rosen, Hai-Feng Ji, Fragment Databases from screened ligands for Drug Discovery (FDSL-DD). J Mol Graph Model . 2024 Mar:127:108669. doi: 10.1016/j.jmgm.2023.108669.
4. J. Wilson, K. Evangelou, Y. Chen, H.-F. JI. In Silico Study of Potential Small Molecule TIPE2 Inhibitors for the Treatment of Cancer. *Sci* **2023**, 5(4). 39.
5. Y. Lam, D. Patel, A. Vaknin, L. Hoffman, T. Thundat, H.-F. Ji Reaction-Based Microcantilever Sensors. *ECS Sens. Plus* 2 **2023**, 033401 DOI 10.1149/2754-2726/ace982
6. A. Mohan; G. Schwenk; E. Feng; H.-F. Ji, S. Muthusami. Pharmacophore based virtual screening for identification of effective inhibitors to combat HPV 16 E6 driven cervical cancer. *Eur J Pharmacol.* **2023**, *5*, 175961. doi: 10.1016/j.ejphar.2023.175961.
7. In Situ Polymerization of Acrylic Acid on a Surface and Inside A Paper Sheet Using DBD Plasma Sky Harper, Matthew Mieles, Hai-Feng Ji, *Polymer*, **2023**, **2023**, *15*, 2965. https://doi.org/10.3390/ polym15132965
8. R. Zaman, J. Xu, J. Wilson, H.-F. Ji Small molecule PD1 and PDL1 inhibitors, *J. Nanosci. Nanomed.* **2023**, *7(1)*, 01-08.
9. H. F. Ji, A General Method to Predict Optical Rotations of Chiral Molecules from Their Structures. *RSC Advances*, **2023**, *13*, 4775 - 4780.
10. U. Kakati, E. J. Elzinga, Z. R. Mansley, B. Roe, F. Alimohammadi, G. Schwenk, J. Ning, Y. Zhu, H.-F. Ji, J. Sun, D. R. Strongin Iridium Incorporation into MnO2 for an Enhanced Electrocatalytic Oxygen Evolution Reaction. *ChemCatChem*. **2023** https://doi.org/10.1002/cctc.202201549.
11. G. R. Schwenk, A. M. Glass, H.-F. Ji, G. D. Ehrlich, S. Navas-Martin, J. E. Król, D. C. Hall Jr. Surfactant-Impregnated MOF-Coated Fabric for Antimicrobial Applications. *ACS Appl. Bio Mater*. **2023**, *6*, 1, 238–245.
12. G. R. Schwenk, J. T. Walters, H.-F. Ji. Structural Consequences of Post-Synthetic Modification of Cu2P3I2. *Micro* **2023**, *3(1)*, 256-263; https://doi.org/10.3390/micro3010018.
13. Cheng, J.; Fan, Y.; Pei, X.; Tian, D.; Liu, Z.; Wei, Z.Z.; Ji, H. - f.; Chen, Q. Mechanism and Reactive Species in a Fountain - Strip DBD Plasma for Degrading Perfluorooctanoic Acid (PFOA). *Water* **2022**, *14*, 3384. https:// doi.org/10.3390/w14213384
14. A. Xie, N. Rendine, H.-F. Ji. Anisotropic and Isotropic Shrinking of Candle Droplets in Cold Water and Warm Water, *Micro*, **2022**, *2(3)*, 508-512; https://doi.org/10.3390/micro2030032

15. Y. Fan, J. Cheng, H.-F. Ji, L. Yang, Z. Liu, Q. Chen, Non-thermal DBD plasma--an energy efficient process for degrading perfluorooctanoic acid (PFOA), *Water*, **2022**, *14(15):*2420 DOI: 10.3390/w14152420

16. G. Schwenk, J. Walters, H.-F. Ji, Stable $Cu_2P_3I_2$ and $Ag_2P_3I_2$ single-wire and thin film devices for humidity sensing, *Micro*, **2022,** 2(1), 183-190; https://doi.org/10.3390/micro2010012

17. A. Mohan, J. Wilson, A. Jeeva; H. F. Ji, Computational approaches for identification of potential inhibitors against Rheumatoid arthritis causing gene Janus kinase 2. J. *Nanomed.* **2022**, *5*, 1054.

18. J. Wilson, H.-F. Ji, Are the SARS-Cov-2 Variants Greater Threats? – A Continued In silico Analysis of the Spike Protein. *JSM Biochem. Mol. Biol.* **2022,** *8*, 1037.

19. A. Mohan, K. Evangelou, H.-F. Ji, P. Vanathi, A. Jeeva, V. R. Talluri. Screening of SARS-CoV-2 Nucleocapsid (N) Protein Inhibitors as Potential Drugs for Sars-Cov-2. *J. Sci. & Tech. Res.* **2022**, 42(4)-2022.

20. M. Mieles, S. Callie, H.-F. Ji, Bulk Polymerization of PEGDA in Spruce Wood Using a DBD Plasma-Initiated Process to Improve the Flexural Strength of the Wood–Polymer Composite. *Plasma* **2022**, *5(1),* 146-153; https://doi.org/10.3390/plasma5010011.

21. L. Gao, V. Jacob, Chaselynn J., K. Evangelou, H.-F. Ji, Directed Collective Breakage of Hydrogen Bond in Ice, *Insight Chem. Biochem.* **2021**, 1(5): ICBC. MS.ID.000525. DOI: 10.33552/ICBC.2021.01.000525.

22. S. Begum, H.-F. Ji, Biochemistry Tuned by Nanopillars, *AIMS Mater. Sci.* **2021**, *8*, 748-759. doi: 10.3934/matersci.2021045.

23. J. Wilson, V. Sokolova, K. Ji, H.-F. Ji, Are the SARS-CoV-2 Variants Greater Threats? - An In Silico Analysis of the Spike Protein, *Austin J. Infect. Dis*. **2021**, *8(2):* 1050.

24. A. Mohan, N. Rendine, M. K. S. Mohammed, A. Jeeva, H. -F. Ji, V. R. Talluri, Structure-based virtual screening, in silico docking, ADME properties prediction and molecular dynamics studies for the identification of potential inhibitors against SARS-CoV-2 M pro, *Mol. Divers*, **2021**, 1-17. doi: 10.1007/s11030-021-10298-0.

25. D. C. Hall Jr., P. Palmer, H.-F. Ji, G. D. Ehrlich, J. E. Król, Bacterial Biofilm Growth on 3D-Printed Materials. *Front. Microbiol.* **2021**, 12: 646303. https://doi.org/10.3389/fmicb.2021.646303

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27. J. L. Waite, J. Hunt, H.-F. Ji, Improving Photocatalytic Performance by Using Nanopillars and Micropillars, *Materials*, **2021**, *14*, 299. https://doi.org/10.3390/ma14020299.

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35. Qiao, Z.; Zhang, H.; Ji, H.-F.; Chen, Q. Computational View toward the Inhibition of SARS-CoV-2 Spike Glycoprotein and the 3CL Protease. *Computation* **2020**, *8*, 53.

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46. A. Pedro. H. Ji, **2019**. Introduction and Characterization of Phosphrous Nanomaterials, ACS book chapter. ACS Books Book: "Fundamentals and Applications of Phosphorous Nanomaterials" bk-2019-00271r.R1

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58. J. B. Smith, I. Adams, H.-F. Ji, Mechanism of Ampicillin Degradation by Nonthermal Plasma Treatment with FE-DBD. *Plasma,* **2018**, *1*, 1-11.

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