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ORCID: 0000-0003-4757-5664 / Researcher ID: C-1084-2008

Primary Appointments and Education

<i>Professor / Texas A&M University</i>		2023–Present
Department of Chemistry	(Home Department)	
Department of Materials Science and Engineering	(Affiliated)	
<i>Associate Head of Graduate Studies of Chemistry / Texas A&M University</i>		2023–Present
<i>Associate Professor / Texas A&M University</i>		2019–2023
<i>Assistant Professor / Texas A&M University</i>		2013–2019
<i>Postdoctoral Scholar / Stanford University</i>		2011–2013
Department of Chemical Engineering	Mentor: Professor Zhenan Bao	
<i>PhD / Northwestern University</i>		2008–2010
Department of Chemistry	Mentor: Professor Fraser Stoddart (Nobel Laureate 2016)	
Thesis Title	“Expanding the Scope on Mechanically Interlocked Molecules”	
<i>Graduate Student / University of California, Los Angeles</i>		2006–2007
Department of Chemistry & Biochemistry	Mentor: Professor Fraser Stoddart (Nobel Laureate 2016)	
<i>MS / Wuhan University & Hong Kong Baptist University</i>		2003–2006
Department of Chemistry	Mentor: Professor Yong-Bing He & Professor Wing-Hong Chan	
Thesis Title	“Study on the Synthesis and Application of Molecular Fluorescent Sensor”	
<i>BS / Wuhan University</i>		1999–2003
Department of Chemistry		

Other Appointments

<i>Humboldt Research Fellow, Visiting Professor / Technische Universität Berlin</i>	2023
<i>Humboldt Research Fellow, Visiting Professor / Technische Universität Dresden</i>	2022
<i>Flexible Joint Visiting Professor / Nanchang Hangkong University</i>	2018–2021
<i>Consultant / Ningbo Kunpeng Environmental Sci-Tech Co Ltd</i>	2017–2019

Honors, Awards and Memberships

Fellow of the Institute of Materials, Minerals and Mining (FIMMM)		2024
Fellow of the Royal Society of Chemistry (FRSC)	<i>Royal Society of Chemistry</i>	2022
Humboldt Research Fellowship for Experienced Researchers	<i>Alexander von Humboldt Foundation</i>	2022
<i>Polymer Chemistry</i> Pioneering Investigator	<i>Royal Society of Chemistry</i>	2021
Presidential Impact Fellow	<i>Texas A&M University</i>	2020
<i>Chemical Communications</i> Emerging Investigator	<i>Royal Society of Chemistry</i>	2020
<i>Journal of Materials Chemistry A</i> Emerging Investigator	<i>Royal Society of Chemistry</i>	2020
CAPA Distinguished Junior Faculty Award	<i>Chinese-American Chemistry Professor Association</i>	2019
Thieme Chemistry Journal Award	<i>Thieme Chemistry</i>	2019
<i>Polymers</i> Young Investigator Award	<i>MDPI</i>	2018
<i>Polymer Chemistry</i> Emerging Investigator	<i>Royal Society of Chemistry</i>	2018
Montague-Center for Teaching Excellence Scholar	<i>Texas A&M University</i>	2017
NSF CAREER Award	<i>National Science Foundation</i>	2017
ACS PMSE Young Investigator	<i>American Chemical Society</i>	2017

KANEKA Junior Faculty Award	<i>Kaneka Americas Holding, Inc.</i>	2015
ACS PRF Doctoral New Investigator	<i>ACS Petroleum Research Fund</i>	2014
IUPAC Prize for Young Chemists Honorable Mention Award	<i>IUPAC</i>	2011
Reaxys® Prize Finalist	<i>Elsevier Properties</i>	2011
National Award for Outstanding Students Studying Abroad	<i>Chinese Government</i>	2010
The Best Student Presentation Award	<i>7th FNano Conference</i>	2010
Non-equilibrium Energy Research Center Fellowship	<i>Northwestern University</i>	2009–2010
Ryan Fellowship	<i>Northwestern University</i>	2008–2010
First Year Graduate Student Fellowship	<i>University of California, Los Angeles</i>	2006
Chang-Guang Special Graduate Scholarship	<i>Wuhan University</i>	2005
People's Scholarship	<i>Wuhan University</i>	2000, 2001, 2002

Refereed Publications

(Sum of the Times Cited = **7569**; *H*-index = **42** / Google Scholar Data on February 20th, 2024)

Label of Co-Authors:

Mentored Graduate Student: §
 Mentored Undergraduate Student: #
 Mentored Postdoc or Visiting Scholar: ‡
 Corresponding Author: *

111. Ma, G.; Li, Z.; Xia, W.; **Fang, L.**; Gu, X.* “Effect of Solvent Quality and Sidechain Architecture on The Conjugated Polymer Chain Conformation in Solution”
Nanoscale, **2024**, DOI:10.1039/d3nr05721f.
110. Li, C. §; Jiangli, B. §; Lee, B. #; Yu, G. §; Zhang, W. §; Chen, H.; Sanders, S.; Al-Hashimi, M.; Banerjee, S.; **Fang, L.*** “Zinc Oxide Nanoparticle-Initiated Photopolymerization Approach to Dual Functional Membranes for Sustainable Water Treatment”
Matter, **2024**, 7, DOI: 10.1016/j.matt.2023.12.033.
<https://paper.sciencenet.cn/htmlpaper/2024/1/202412411473616694274.shtm> (Highlight by ScienceNet in Chinese)
109. Lin, H.; Yang, Y.; Diamond, B.; Yan, T.-H.; Bakhmutov, V. I.; Festus, K. W.; Hsu, Y.-C.; Cai, P.; Xiao, Z.; Leng, M. §; Afolabi, I.; Day, G. S.; **Fang, L.***; Hendon, C. H.*; Zhou, H.-C.* “Integrating Photoactive Ligands into Crystalline Ultra-thin 2D MOF Nanosheets for Efficient Photo-induced Energy Transfer”
J. Am. Chem. Soc. **2024**, 146, 1491–1500. DOI: 10.1021/jacs.3c10917.
108. Sanders, S. L.; Douglas, L. D.; Sill, T.; Stewart, K.; Pieniazek, N.; Li, C. §; Walters, E.; Al-Hashimi, M.; **Fang, L.**; Davidson, R. D.; Banerjee, S.* “Tetrapodal Textured Janus Textiles for Accessible Menstrual Health”
iScience, **2023**, 26, 108224. DOI: 10.1016/j.isci.2023.108224.
107. Zhu, Y.; Peng, B.-J. §; Kumar, S.; Stover, L.; Lyu, J.; Zhang, T.; Schrecke, S.; Russell, R. H.; **Fang, L.***; Laganowsky, A.* “Polyamine Detergents Tailored for Native Mass Spectrometry Studies of Membrane Proteins”
Nature Commun. **2023**, 14, 5676. DOI: 10.1038/s41467-023-41429-w.
106. Leng, M. §; Koripally, N.; Huang, J.; Vriza, A.; Lee, K. Y.; Ji, X. §; Li, C. §; Hays, M. §; Tu, Q.; Dunbar, K.; Xu, J.*; Ng, T. N.*; **Fang, L.*** “Synthesis and Exceptional Operational Durability of Polyaniline-Inspired Conductive Ladder Polymers”
Mater. Horiz. **2023**, 10, 4354–4364. DOI: 10.1039/d3mh00883e.
105. Li, J.; Peng, B.-J. §; Li, S.; Tabor, D. P.; **Fang, L.***; Schroeder, C. M.* “Ladder-Type Conjugated Molecules as Robust Multi-State Single-Molecule Switches”
Chem **2023**, 9, 2282–2297. DOI: 10.1016/j.chempr.2023.05.001.
 Highlighted by *Science Daily*, *Phys.org*, *Mirage News*, and *EurekAlert!*,
<https://www.sciencedaily.com/releases/2023/06/230630123238.htm>

Highlighted among “Research Bits” by *Semiconductor Engineering* and *Zephyrnet.com*

<https://zephyrnet.com/research-bits-july-5/>

Highlighted by *Cell Press Mobile* “Paper Rapid Delivery” (In Chinese)

https://m.thepaper.cn/newsDetail_forward_23409909

104. Leng, M.[§]; Fang, L.* “Semiconducting Ladder-Type Covalent Organic Frameworks”
Chem **2022**, 8, 2904–2906. DOI: 10.1016/j.chempr.2022.10.009.
Preview article for research article 10.1016/j.chempr.2022.08.001 in the same issue.
103. Soto, F. A.; Balbuena, P. B.*; Banerjee, S.; Fang, L. “Emulating Synaptic Behavior in Surface-Functionalized MoS₂ through Modulation of Interfacial Charge Transfer through External Stimuli”
Chem. Phys. Phys. Chem. **2022**, 24, 24116–24122. DOI: 10.1039/D2CP03353D.
102. Lee, J.[§]; Li, S.; Ji, X.[§]; Che, S.[§]; Cao, Y.[§]; Tabor, D. P.*; Fang, L.* “Molecular Mechanism of Rigidity- and Planarity-Promoted, State-Dependent Doping of Conjugated Ladder-Type Molecules”
Mater. Chem. Front. **2022**, 6, 3329–3337. DOI: 10.1039/D2QM00789D.
Invited Contribution to the *Emerging Investigator Series*.
101. Attar, S.; Yang, R.; Comi, M.; Chen, Z.; Ji, X.[§]; Banerjee, S.; Fang, L.; Liu, Y.; Al-Hashimi, M.* “Thiazole Fused S,N-Heteroacene Step-Ladder Polymeric Semiconductors for Organic Transistors”
Chem. Sci. **2022**, 13, 12034–12044. DOI: 10.1039/d2sc04661j.
100. Ma, G.; Leng, M.[§]; Li, S.; Cao, Z.; Cao, Y.[§]; Tabor, D.*; Fang, L.*; Gu, X.* “Robust Chain Aggregation of Low-Entropy Rigid Ladder Polymer in Solution”
J. Mater. Chem. C **2022**, 10, 13896–13904. DOI: 10.1039/D2TC00761D.
99. Mu, A. U.[§]; Kim, Y.; Miranda, O.[§]; Vazquez, M.; Strzalka J.; Xu, J.; Fang, L.* “Hydrogen Bond-Promoted Planar Conformation, Crystallinity, and Charge Transport in Semiconducting Diazaisoindigo Derivatives”
ACS Mater. Lett. **2022**, 4, 1270–1278. DOI: 10.1021/acsmaterialslett.2c00179.
Invited Contribution to the *Organic Functional Materials: Special Issue in Honor of Professor Daoben Zhu on His 80th Birthday*.
98. Kang, N.; Cho, S.; Leonhardt, E.; Liu, C.; Verkhoturov, S.; Woodward, W.; Eller, M.; Yuan, T.[§]; Fitzgibbons, T.; Borguet, Y.; Jahnke, A.; Sokolov, A.; McIntire, T.; Reinhardt, C.; Fang, L.; Schweikert, E.; Spencer, L.; Sun, G.*; Xie, G.*; Trefonas, P.*; Wooley, K.* “Topological Design of Highly Anisotropic Aligned Hole Transporting Molecular Bottlebrushes for Solution-processed OLEDs”
J. Am. Chem. Soc. **2022**, 144, 8084–8095. DOI: 10.1021/jacs.2c00420.
97. Phillips, B.[§]; Abani[§]; Lin, H.; Wei, P.; Li, C.; Zhao, M.; Handy, J.; Banerjee, S.; Sue, H.-J.; Pentzer, E.; Al-Hashimi, M.; Zhou, H.-C.*; Fang, L.* “Inverse Emulsion-Crosslinked Cyclodextrin Polymer Nanoparticles for Selective Adsorption and Chemiresistive Sensing of BTEX”
Mater. Today Chem. **2022**, 24, 100915. DOI: 10.1016/j.mtchem.2022.100915.
On the “Special issue dedicated to Sir Fraser Stoddart on the occasion of his 80th birthday”
96. Bajpayee, A.; Rivera-Gonzalez, N.; Braham, E. J.; Alivio, T. E. G.; Anita; Alvi, S.; Li, C.[§]; Cool, N.; Al-Hashimi, M.; Fang, L.; Banerjee, S.* “Multiscale Textured Mesh Substrates that Glide Alcohol Droplets and Impede Ice Nucleation”
Adv. Eng. Mater. **2022**, 24, 2101524. DOI: 10.1002/adem.202101524.
95. Cao, Z.; Ma, G.; Leng, M.[§]; Zhang, S.; Chen, J.; Do, C.; Hong, K.; Fang, L.; Gu, X.* “Variable-Temperature Scattering and Spectroscopy Characterizations for Temperature-Dependent Solution Assembly of PffBT4T-Based Conjugated Polymers”
ACS Appl. Polym. Mater. **2022**, DOI: 10.1021/acsapm.1c01511.
94. Li, C.[§]; Lee, B.; Wang, C.[§]; Bajpayee, A.; Douglas, L.; Phillips, B.[§]; Rivera-Gonzalez, N.; Peng, B.-J.[§]; Yu, G.[§]; Jiang, Z.; Banerjee, S.*; Fang, L.* “Photopolymerized Superhydrophobic Hybrid Coating Enabled by Dual-purpose Tetrapodal ZnO for Liquid/liquid Separation”
Mater. Horiz. **2022**, 9, 452–461. DOI: 10.1039/D1MH01672E.
Invited contribution to the Themed Issue “Celebrating Seth Marder’s 60th Birthday”

93. Yan, X.; Che, S.[§]; Yang, F.*; Xu, Z.; Liu, H.; Li, C.; Yan, L.; Ta, N.; Sun, S.; Wei, Q.; **Fang, L.***; Li, Y.* “Highly Efficient Water Splitting Catalyst Composed of N,P-Doped Porous Carbon Decorated with Surface P-Enriched Ni₂P Nanoparticles”
ACS Appl. Mater. Interfaces **2022**, 14, 20358–20367. DOI: 10.1021/acsami.1c14363.
Invited contribution to the Forum on “Materials and Interfaces for Energy Storage and Conversion”
92. Cao, Z.; Leng, M.[§]; Cao, Y.[§]; Gu, X.*; **Fang, L.*** “How Rigid are Conjugated Non-Ladder and Ladder Polymers?”
J. Polym. Sci. **2022**, 60, 298–310. DOI: 10.1002/pol.20210550
Invited contribution to the Special Issue “Semiconducting Polymers for Advanced Organic Electronics and Bioelectronics”
Highlighted by *Advanced Science News*: <https://mp.weixin.qq.com/s/KufTRSqTSNRnxuLDBNksyA>
91. Chen, P.; Zheng, H.; Jiang, H.*; Liu, J.; Tu, X.; Zhang, W.; Phillips, B. K.[§]; **Fang, L.***; Zou, J.-P.* “Oxygen-Vacancy-Rich Phenanthroline/TiO₂ Nanocomposite: An Integrated Adsorption, Detection and Photocatalytic Material for Complex Pollutants Remediation”
Chin. Chem. Lett. **2022**, 33, 907–911. DOI: 10.1016/j.cclet.2021.07.002.
90. Patra, D.; Comi, M.; Zhang, X.; Kini, G. P.; Udayakantha, M.; Kalin, A. J.[§]; Banerjee, S.; **Fang, L.**; Guo, X.; Al-Hashimi, M.* “Design, Synthesis and Characterization of Fused Bithiazole- and Dithiophene-Based Low Bandgap Thienylenevinylene Copolymers”
Polym. Chem. **2021**, 12, 5942–5951, DOI: 10.1039/d1py00773d.
Highlighted on the Front Cover.
89. Yu, K.; Ji, X.[§]; Yuan, T.[§]; Li, J.; Hu, X.; Liu, Z.*; Zhou, X.*; **Fang, L.*** “Robust Jumping Actuator with a Shrimp-Shell Architecture”
Adv. Mater. **2021**, 33, 2104558. DOI: 10.1002/adma.202104558.
Highlighted by X-mol: <https://www.x-mol.com/news/696802>
88. Bhat, G. A.; Rashad, A. Z.; Ji, X.[§]; Quiroz, M.; **Fang, L.***; Darensbourg, D. J.* “TEMPO Containing Radical Polymonothiocarbonate Polymers with Regio- and Stereo-Regularities: Synthesis, Characterization, and Electrical Conductivity Studies”
Angew. Chem. Int. Ed. **2021**, 60, 20734–20738. DOI: 10.1002/anie.202108041.
Chosen to be among the “Hot Papers” by the Editors.
87. Hu, C.; Zhao, M.; Li, Q.; Liu, Z.; Hao, N.; Meng, X.; Li, J.; Lin, F.; Li, C.[§]; **Fang, L.**; Dai, S. Y.; Ragauskas, A. J.; Sue, H.-J.; Yuan, J.* “Phototunable Lignin Plastics to Enable Recyclability”
ChemSusChem **2021**, 14, 4260–4269. DOI: 10.1002/cssc.202101040.
86. Jiang, W.; Chen, P.*; Li, X.; Wu, G.; Zheng, H.; Li, C.; **Fang, L.***; Jiang, H.* “ π -Conjugation Extension and Defects Introduction into g-C₃N₄ by Phenanthroline Molecular Doping to Form a Metal-Free Electrochemical Sensor towards Effective 4-NP Detection”
Diam. Relat. Mater. **2021**, 119, 108557. DOI: 10.1016/j.diamond.2021.108557.
85. Che, S.[§]; Li, C.[§]; Wang, C.[§]; Zaheer, W.; Ji, X.[§]; Phillips, B.[§]; Gurbandurdyev, G.; Glynn, J.[#]; Guo, Z.-H.[‡]; Al-Hashimi, M.; Zhou, H.-C.; Banerjee, S.*; **Fang, L.*** “Solution-Processable Porous Graphitic Carbon from Bottom-Up Synthesis and Low-Temperature Graphitization”
Chem. Sci. **2021**, 12, 8438–8444. DOI: 10.1039/d1sc01902c.
84. Zhang, W.[‡]; Ji, X.[§]; Al-Hashimi, M.; Wang, C.*; **Fang, L.*** “Feasible Fabrication and Textile Application of Polymer Composites Featuring Dual Optical Thermoresponses”
Chem. Eng. J. **2021**, 419, 129553. DOI: 10.1016/j.cej.2021.129553.
83. Ji, X.[§]; **Fang, L.*** “Quinoidal Conjugated Polymers with Open-Shell Characters”
Polym. Chem. **2021**, 12, 1347–1361. DOI: 10.1039/D0PY01298J.
Invited contribution to the “Polymer Chemistry Pioneering Investigator Themed Issue”.
82. Comí, M.; Ocheje, M. U.; Attar, S.; Mu, A. U.[§]; Philips, B. K.[§]; Kalin, A. J.[§]; Kakosimos, K. E.; **Fang, L.**; Rondeau-Gagné, S.; Al-Hashimi, M.* “Synthesis and Photocyclization of Conjugated Diselenophene Pyrrole-2,5-Dione Based Monomers for Optoelectronics”
Macromolecules **2021**, 54, 665–672. DOI: 10.1021/acs.macromol.0c02021.

Cover Highlight on Issue 2, 2021.

Highlighted by *Synfact*, **2021**, 17, 0277.

81. Cao, Y.[§]; Zhu, C.^{§*}; Barlog, M.; Barker, K. P.[#]; Kalin, A. J.[§]; Al-Hashimi, M.*; **Fang, L.*** “Electron-Deficient Polycyclic π -System Fused with Multiple B $\leftarrow$ N Coordinate Bonds”
J. Org. Chem. **2021**, 86, 2100–2106. DOI: 10.1021/acs.joc.0c02052.
80. Wu, B.; Wu, H.; Zhou, Y.; Zheng, D.; Jia, X.; **Fang, L.**; Zhu, L.* “Controlling Ultra-Large Optical Asymmetry in Amorphous Molecular Aggregations”
Angew. Chem. Int. Ed. **2021**, 60, 3672–3678. DOI: 10.1002/anie.202012224.
79. Ji, X.[§]; Leng, M.[§]; Xie, H.; Wang, C.[§]; Dunbar, K. R.; Zou, Y.^{‡*}; **Fang, L.*** “Extraordinary Electrochemical Stability and Extended Polaron Delocalization of Ladder-Type Polyaniline-Analogous Polymers”
Chem. Sci. **2020**, 11, 12737–12745. DOI: 10.1039/D0SC03348K.
- Invited contribution to the *Chemical Science* 10th anniversary issue.
78. Yu, C.-H.; Zhu, C.[§]; Ji, X.[§]; Hu, W.; Xie, H.; Bhuvanesh, N.; **Fang, L.***; Ozerov, O.* “Palladium Bis-Pincer Complexes with Controlled Rigidity and Inter-Metal Distance”
Inorg. Chem. Front. **2020**, 7, 4357–4366. DOI: 10.1039/d0qi01111h.
77. Phillips, B. K.[§]; Wang, C.[§]; Tu, X.*; Chang, C.-H.[§]; Banerjee, S.; Al-Hashimi, M.; Hu, W.*; **Fang, L.*** “Cyclodextrin-Derived Polymer Networks for Selective Molecular Adsorption”
Chem. Commun. **2020**, 56, 11783–11786. DOI: 10.1039/D0CC04784H.
- Part of the themed collection “2020 Emerging Investigators”
76. Che, S.[§]; **Fang, L.*** “Porous Ladder Polymer Networks”
Chem **2020**, 6, 2558–2590. DOI: 10.1016/j.chempr.2020.08.002.
75. Lyu, J.; Liu, Y.; McCabe, J.; Schrecke, S.; **Fang, L.**; Russell, D.; Laganowsky, A.* “Discovery of Potent Charge-Reducing Molecules for Native Ion Mobility Mass Spectrometry Studies.”
Anal. Chem. **2020**, 92, 11242–11249. DOI: 10.1021/acs.analchem.0c01826.
74. Phillips, B. K.[§]; Banerjee, S.; Tu, X.*; **Fang, L.*** “Electrical Vapor Sensing with Macrocyclic Molecular Receptors”
Supramol. Chem. **2020**, 32, 165–177. DOI: 10.1080/10610278.2020.1726916.
73. Zheng, K.; He, C.; Nour, H. F.; Zhang, Z.; Yuan, T.[§]; Traboulsi, H.; Mazher, J. Traboulsi, A.; **Fang, L.**; Olson, M. A.* “Augmented Polyhydrazone Formation in Water by Template-Assisted Polymerization using Dual-Purpose Supramolecular Templates”
Polym. Chem. **2020**, 11, 1806–1819. DOI: 10.1039/c9py01476d.
72. Kalin, A. J.[§]; Che, S.[§]; Wang, C.[§]; Mu, A. U.[§]; Duka, E.[#]; **Fang, L.*** “Solution-Processable Porous Nanoparticles of a Conjugated Ladder Polymer Network”
Macromolecules **2020**, 53, 922–928. DOI: 10.1021/acs.macromol.9b02635.
71. Ji, X.[§]; Xie, H.; Zhu, C.[§]; Zou, Y.[‡]; Mu, A. U.[§]; Al-Hashimi, M.; Dunbar, K. R.; **Fang, L.*** “Pauli Paramagnetism of Stable Analogues of Pernigraniline Salt Featuring Ladder-Type Constitution”
J. Am. Chem. Soc. **2020**, 142, 641–648. DOI: 10.1021/jacs.9b12626.
- Highlighted in *Synfacts*, **2020**, 16, 0286. DOI: 10.1055/s-0039-1690373.
- Highlighted by X-mol, <https://www.x-mol.com/news/158555>
70. Che, S.[§]; Pang, J.; Kalin, A. J.[§]; Wang, C.[§]; Ji, X.[§]; Lee, J.[§]; Li, J.; Tu, X.; Zhang, Q.; Zhou, H.-C.; **Fang, L.*** “Rigid Ladder-Type Porous Polymer Networks for Entropically Favorable Gas Adsorption”
ACS Materials Lett. **2020**, 2, 49–54. DOI: 10.1021/acsmaterialslett.9b00434.
- Highlighted by X-mol, <https://www.x-mol.com/news/118597>
69. Wang, C.[§]; Rutledge, E. R. C.[#]; Che, S.[§]; Li, C.[§]; Lee, J.[§]; Kalin, A. J.[§]; Zhang, C.; Zhou, H.-C.; Guo, Z.-H.*; **Fang, L.*** “Aromatic Porous Polymer Network Membranes for Organic Solvent Nanofiltration under Extreme Conditions”
J. Mater. Chem. A **2020**, 8, 15891–15899. DOI: 10.1039/C9TA10190J.
- Among the “2020 Emerging Investigators Themed Issue” for *Journal of Materials Chemistry A*.
- Featured in “*Journal of Materials Chemistry A* Lunar New Year Collection 2021” among the top 50 most popular articles published in 2020.

68. Zhang, W.[‡]; Ji, X.[§]; Peng, B.-J.[§]; Che, S.[§]; Ge, F.; Liu, W.; Al-Hashimi, M.; Wang, C.*; **Fang, L.*** “High-Performance Thermoresponsive Dual-Output Dye System for Smart Textile Application”
Adv. Funct. Mater. **2020**, *30*, 1906463. DOI: 10.1002/adfm.201906463.
 - Highlighted by Materials Views China.
67. Barlóg, M.; Zhang, X.; Kulai, I.; Yang, D. S.; Sredojevic, D.; Sil, A.; Ji, X.[§]; Salih, K.; Bazzi, H. S.; Bronstein, H.; **Fang, L.**; Kim, J.; Marks, T.; Guo, X.; Al-Hashimi, M.* “Indacenodithiazole Ladder Type Bridged Di(thiophene)-Difluoro-Benzothiadiazole Conjugated Copolymers as Ambipolar Organic Field Effect Transistors”
Chem. Mater. **2019**, *31*, 9488–9496. DOI: 10.1021/acs.chemmater.9b03525.
66. Li, X.-S.; Han, J.; Sun, M.; Wu, J.-R.; Lei, L.; Li, J.; **Fang, L.***; Yang, Y.-W.* “Mesoporous Silica Nanobeads Dual-Functionalized with AIEgens and Leaning Pillar [6] Arene-Based Supramolecular Switches for Imaging and Stimuli-Responsive Drug Release,”
Chem. Commun. **2019**, *55*, 14099–14102. DOI: 10.1039/C9CC07115F.
 - **Front Cover** of Number 94 in 2019.
 - Part of the themed collection: “Cucurbiturils and Related Cavitands”.
65. Zhang, Z.; Liu, Q.; Sun, Z.; Phillips, B.[§]; Wang, Z.; Al-Hashimi, M.; **Fang, L.**; Olson, M. A.* “Processing Poly-Lipoic Ester-Based Coacervates for the Efficient Removal of Organic Micropollutants from Water and Increased Point-of-Use Versatility”
Chem. Mater. **2019**, *31*, 4405–4417. DOI: 10.1021/acs.chemmater.9b00725.
64. Zhu, C.[§]; Kalin, A. J.[§]; **Fang, L.*** “Covalent and Noncovalent Approaches to Rigid Coplanar π -Conjugated Molecules and Macromolecules”
Acc. Chem. Res. **2019**, *52*, 1089–1100. DOI: 10.1021/acs.accounts.9b00022.
63. Barlóg, M.; Kulai, I.; Ji, X.[§]; Bhuvanesh, N.; Dey, S.; Sliwinski, E. P.; Bazzi, H. S.; **Fang, L.**; Al-Hashimi, M.* “Synthesis, Characterization and Crystal Structures of Novel Fluorinated Di(thiazolyl)benzene Derivatives”
Org. Chem. Front. **2019**, *6*, 780–790. DOI: 10.1039/c9qo00044e.
62. Zhu, C.[§]; Ji, X.[§]; You, D.; Chen, T. L.; Mu, A. U.[§]; Baker, K. P.[#]; Klivansky, L. M.; Liu, Y.; **Fang, L.*** “Extraordinary Redox Activities in Ladder-Type Conjugated Molecules Enabled by B←N Coordination-Promoted Delocalization and Hyperconjugation”
J. Am. Chem. Soc. **2018**, *140*, 18173–18182. DOI: 10.1021/jacs.8b11337.
 - Highlighted on X-mol: <https://www.x-mol.com/news/15713>
61. Liu, Y.; Philips, B.[§]; Li, W.; Zhang, Z.; Wang, L.; **Fang, L.***; Qiu, J.; Wang, S*. “Fullerene Tailored Graphene Oxide Interlayer Spacing for Efficient Water Desalination”
ACS Appl. Nano Mater. **2018**, *1*, 6168–6175. DOI: 10.1021/acsanm.8b01375.
60. Wang, L.; Zhang, Z.; Liu, Y.; Wang, B.; **Fang, L.**; Qiu, J.; Zhang, K.; Wang, S. “Exceptional Thermoelectric Properties of Flexible Organic-Inorganic Hybrids with Monodispersed and Periodic Nanophase”
Nature Commun. **2018**, *9*, 3817. DOI: 10.1038/s41467-018-06251-9.
59. Xu, Y.; Yuan, T.[§]; Nour, H. F.; **Fang, L.***; Olson, M. A.* “Bis-Bipyridinium Gemini Surfactant-Based Supramolecular Helical Fibers and Solid State Thermochromism”
Chem. Eur. J. **2018**, *24*, 16558–16569. DOI: 10.1002/chem.201803496.
 - Selected as “**Very Important Paper**”
 - Second of a back-to-back contribution.
58. Yuan, T.[§]; Sun, Z.; Mu, A. U.[§]; Zeng, M.; Kalin, A. J.[§]; Cheng, Z.; Olson, M. A.*; **Fang, L.*** “Assembly and Chiral Memory Effect of Dynamic Macroscopic Supramolecular Helices”
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Invited Presentations and Lectures

- (1) Conjugated Ladder Polymers and Polymer Networks: Fusing Rings for Materials Functions, *University of California Santa Cruz*, California, Dec 4, **2023**.
- (2) Advancing Organic Materials through Conjugated Molecular Ladders, *JGP Seminar on Ladder Polymers*, *Kyoto University*, Kyoto, Japan, Nov 24, **2023**.
- (3) Advancing Organic Materials through Conjugated Molecular Ladders, *Frontier of Chemistry Lecture Series*, *The University of Hong Kong*, Hong Kong, China, Nov 22, **2023**.
- (4) Conjugated Ladder Polymers and Polymer Networks: Fusing Rings for Materials Functions, *Hong Kong Polytechnic University*, Hong Kong, China, July 19, **2023**.

- (5) Conjugated Ladder Polymers and Polymer Networks: Fusing Rings for Materials Functions, *Humboldt University of Berlin*, Germany, June 22, **2023**.
- (6) Conjugated Ladder Polymers: the Ladder to Materials Innovation and Advance, *Polymers — Gordon Research Conference*, Mount Holyoke College, Massachusetts, June 7, **2023**.
- (7) Conjugated Ladder Polymers and Polymer Networks: New Functions Imparted by Fused-Ring Constitution, *3rd From Carbon-Rich Molecules to Carbon-Based Materials Conference*, Tulum, Mexico, May 8, **2023**.
- (8) A Ladder-Type Conjugated Molecule as Highly Robust Multi-State Single-Molecule Switch, *EL12 From Molecules to Emerging Molecular Devices—Beyond Electronic Transport*, 2023 MRS Spring Meeting, San Francisco, California, April 15, **2023**.
- (9) Bottom-Up Chemistry on Polymer Composite Materials for Sustainable Chemical Separation, *POLY Symposium: Crossroads of Polymers, Composite, and Sustainable Energy*, ACS National Meeting, Indianapolis, Indiana, March 29, **2023**.
- (10) Stability Challenges of Conjugated Polymers and Opportunities Offered by Ladder-Type Structure, *POLY Symposium: Challenges and Opportunities in Semiconducting Polymers*, ACS National Meeting, Indianapolis, Indiana, March 26, **2023**.
- (11) Synthesis, Processing, and Advanced Materials Application of Conjugated Ladder Polymers, *2022 Chinese-American Chemistry & Chemical Biology Professors Symposium*, University of South Florida, Tampa, Florida, December 22, **2022**.
- (12) Bottom-Up Innovations on Organic Functional Materials for Sustainable Chemical Separation, *REsilient SUSTainable Roadmap for Gulf-Coast Economies (RESURGE) Stakeholder Workshop*, Hagler Institute for Advanced Study, Texas A&M University, College Station, Texas, October 14, **2022**.
- (13) Chemistry and Engineering of Conjugated Ladder Polymers, *Ryan Fellows Reunion Symposium*, International Institute for Nanotechnology, Northwestern University, Evanston, Illinois, September 9, **2022**.
- (14) Climbing the Ladder to Next-Generation Conjugated Ladder Polymers, *POLY Symposium: Next Generation Synthesis and Structure of π -Conjugated Polymers*, ACS National Meeting, Chicago, Illinois, August 21, **2022**.
- (15) Synthesis, Processing, and Advanced Materials Application of Conjugated Ladder Polymers, *ACS Internet Symposium by ACS — Shanghai Chapter*, East China Normal University, Virtual, July 30, **2022**.
- (16) Chemistry and Engineering of Conjugated Ladder Polymers for Advanced Material Applications, *International Course on Macromolecular Science for Advanced and Sustainable Materials*, Erice, Italy, July 13, **2022**.
- (17) Rigid Coplanar π -Conjugated Macromolecules and Polymer Networks, *Bergische Universität Wuppertal*, Wuppertal, Germany, June 21, **2022**.
- (18) Conjugated Ladder Molecules and Macromolecules: From Chemical Synthesis to Materials Applications, *POLYMAT*, San Sebastian, Spain, June, 9, **2022**.
- (19) Conjugated Ladder Polymers and Polymer Networks: New Functions Imparted by Fused-Ring Constitution, *Polymers 2022: New Trends in Polymer Science*, Turin, Italy, May 26, **2022**.
- (20) Climbing the Ladder to Advanced Rigid Ladder Polymers, *Symposium SB01: Organic Electronics Multimodal Characterization and Computation-Driven Material Design and Performance*, 2022 Materials Research Society Spring Meeting, Honolulu, Hawaii, May 12, **2022**.
- (21) Rigid Coplanar π -Conjugated Macromolecules and Polymer Networks, *University of Fribourg*, Switzerland, April 13, **2022**.
- (22) Rigid Coplanar π -Conjugated Molecules and Macromolecules, *University of Zürich*, Switzerland, April 12, **2022**.
- (23) Climbing the Ladder to Advanced Rigid Ladder Polymers, *Scientific Colloquium at Leibniz-Institute für Polymerforschung Dresden e.V.*, Dresden, Germany, March 28, **2022**.
- (24) Three Tales of Smart Organic Materials on Stimuli Responses, Separation, and Sensing, *Texas A&M University in Qatar - Science Colloquium*, Doha, Qatar, March 22, **2022**.

- (25) Rigid Coplanar π -Conjugated Macromolecules and Polymer Networks, *Seminar at the Chair for Molecular Functional Materials, Technical University of Dresden*, Dresden, Germany, February 11, **2022**.
- (26) Rigid Coplanar π -Conjugated Macromolecules and Polymer Networks, *University of Southern Mississippi*, Hattiesburg, Mississippi, November 10, **2021**.
- (27) Entropically Favorable Methane Storage by Porous Ladder Polymer Networks, *ENFL Symposium on Energy Technologies: From Concept to Commercialization, ACS Fall 2020 National Meeting*, Virtual, August, **2020**.
- (28) Synthesis and Assembly of a Quinacridone-Derivative for Thermoresponsive Smart Textile Application, *ORGN Symposium on Functional Organic Assemblies, ACS Fall 2020 National Meeting*, Virtual, August, **2020**.
- (29) Rigid Coplanar π -Conjugated Macromolecules and Polymer Networks, *Virtual Seminar of the Soft Matter and Biological Group at Oak Ridge National Laboratories*, July 30, **2020**.
- (30) (Cancelled due to COVID) Design, Synthesis, and Function of Conjugated Ladder Polymers, *POLY Symposium on Frontiers in Conjugated Polymer Design & Synthesis, ACS Spring 2020 National Meeting*, Philadelphia, March 24, **2020**.
- (31) (Cancelled due to COVID) Covalent and Non-Covalent Approaches to Rigid Conjugated π -Systems, *2nd CAPA Award Symposium*, Philly, March 21, **2020**.
- (32) Covalent and Noncovalent Approaches to Rigid Coplanar π -Conjugated Molecules and Macromolecules, *University of South Florida*, Tampa Bay, Florida, February 11, **2020**.
- (33) Organic Porous Polymer Network Materials for Clean Energy Applications, *The 2nd International Symposium on New Materials and Technologies for Wastewater Treatment*, Nanchang, China, January 10, **2020**.
- (34) Covalent and Noncovalent Approaches to Rigid Coplanar π -Conjugated Molecules and Macromolecules, *Shanghai Jiaotong University*, Shanghai, China, January 3, **2020**.
- (35) Thermoresponsive Dual-Output Dye System for Smart Textile Application, *ACS Division of Polymer Chemistry Workshop: Next Generation Smart Materials*, Savannah, Georgia, December 16, **2019**.
- (36) Extraordinary Redox Activities and Multi-Color Electrochromism of B-N bridged Ladder-Type Molecules, *Molecular Foundry 2019 User Meeting*, Lawrence Berkeley National Laboratory, California, August 21, **2019**.
- (37) Covalent and Noncovalent Approaches to Rigid Coplanar π -Conjugated Molecules and Macromolecules, *Central China Normal University*, Wuhan, China, June 21, **2019**.
- (38) Award Lecture: Covalent and Noncovalent Approaches to Rigid Coplanar π -Conjugated Molecules and Macromolecules, *The 15th Sino-US Chemistry Professors Conference*, Xinxiang, China, June 17, **2019**.
- (39) Molecular Engineering of Porous Polymer Network Membranes for Separation and Desalination, *The 1st International Symposium on New Materials and Technologies for Wastewater Treatment*, Nanchang, China, December 20, **2018**.
- (40) Coplanarizing Functional π -Systems Using Covalent and Non-Covalent Bonds, *10th Singapore International Chemistry Conference*, Singapore, December 17, **2018**.
- (41) Ladderizing Functional Organic π -Systems, *Georgia State University*, Atlanta, Georgia, September 21, **2018**.
- (42) Ladderizing Functional Organic π -Systems, *University of Georgia*, Athens, Georgia, September 20th, **2018**.
- (43) Tunable Optical Properties and Electrochemistry of Ladder-Type Conjugated Molecules Bridged by Dynamic B—N Coordination, *INOR Symposium on Recent Advances in the Photochemistry & Photophysics of the p-Block Elements, 256th ACS National Meeting*, Boston, August 21, **2018**.
- (44) Hyperbranched Polymer Nanoparticles Featuring Ladder-type Conjugated Backbones, *Tosoh Lectures, 256th ACS National Meeting*, Boston, August 21, **2018**.
- (45) Active Manipulation of Intramolecular Hydrogen Bonds Enables Synthesis and Solution Processing of a Solvent-Resistant Rigid Polymer, *PMSE Symposium on Dynamic Bonds for Structurally Precise Polymeric Materials, 256th ACS National Meeting*, Boston, August 20, **2018**.
- (46) Synthesis, Processing and Function of Conjugated Ladder Polymers, *Nanchang Hangkong University*, Nanchang, China, June 26, **2018**.

- (47) Conjugated Ladder Oligomers and Polymers, *The 14th Sino-US Chemistry Professors Conference*, Wuhan, China, June 21, **2018**.
- (48) Integrating Molecular Rigidity and Soft Matter Characters in Ladder Polymers, *University of Houston*, Texas, April 23, **2018**.
- (49) Integrating Molecular Rigidity and Soft Matter Characters in Ladder Polymers, *International Conference on Organic and Polymer Synthesis*, Guangzhou, China, April 8, **2018**.
- (50) Integrating Molecular Rigidity and Soft Matter Characters in Ladder Polymers, *South University of Science and Technology of China*, April 5, **2018**.
- (51) Integrating Molecular Rigidity and Soft Matter Characters in Ladder Polymers, *Shenzhen University*, Shenzhen, China, April 4, **2018**.
- (52) Integrating Molecular Rigidity and Soft Matter Characters in Ladder Polymers, *Young Investigator Award Session, Polymers 2018: Design, Function and Application*, Barcelona, Spain, March 21, **2018**.
- (53) Integrating Molecular Rigidity and Soft Matter Characters in Ladder Polymers, *University of California Los Angeles*, California, March 1, **2018**.
- (54) Molecular Coplanarity and Rigidity of π -Conjugated Oligomers and Polymers, *University of Oregon*, Eugene, Oregon, February 9, **2018**.
- (55) Molecular Coplanarity and Rigidity of π -Conjugated Oligomers and Polymers, *University of Washington*, Seattle, Washington, February 8, **2018**.
- (56) Molecular Rigidity in Soft Matter, *Sandia National Laboratories*, Albuquerque, New Mexico, January 23, **2018**.
- (57) π -Conjugated Thermochromic and Ladder-Type Oligomers, Polymers, and Networks: Manipulating Optical Properties of Organic Materials, *Jiangnan University*, Wuxi, China, January 17, **2018**.
- (58) Functional π -Conjugated Oligomers, Polymers, and Networks, *Texas A&M University in Qatar*, Doha, Qatar, November 28, **2017**.
- (59) Molecular Coplanarity and Rigidity of π -Conjugated Oligomers and Polymers, *Stanford University*, Stanford, California, November 22, **2017**.
- (60) Molecular Coplanarity and Rigidity of π -Conjugated Oligomers and Polymers, *University of California, Davis*, California, November 21, **2017**.
- (61) Rigidifying and Coplanarizing π -Conjugated Molecules and Macromolecules, *University of Texas*, Austin, Texas, November 13, **2017**.
- (62) Rigidifying and Coplanarizing π -Conjugated Molecules and Macromolecules, *University of Norte Dame*, South Bend, Indiana, October 25, **2017**.
- (63) Rigidifying and Coplanarizing π -Conjugated Molecules and Macromolecules, *Purdue University*, West Lafayette, Indiana, October 24, **2017**.
- (64) Molecular Coplanarity and Rigidity of π -Conjugated Oligomers and Polymers, *University of Colorado*, Boulder, Colorado, October 16, **2017**.
- (65) Rigidifying and Coplanarizing π -Conjugated Molecules and Macromolecules, *University of North Carolina*, Chapel Hill, North Carolina, September 14, **2017**.
- (66) Conformational Control of π -Conjugated Organic Materials through Dynamic Bonds, *Plenary Session, Molecular Foundry User Meeting*, Lawrence Berkeley National Laboratory, California, August 17, **2017**.
- (67) Molecular Coplanarity of π -Conjugated Oligomers and Polymers: from Synthesis to Function, *GPC 2017 — The Polymer and Biomacromolecular Applications and Characterization Conference*, Atlanta, Georgia, July 20, **2017**.
- (68) Synthesis and Processing of Ladder Polymers, *A Golden Age for Chemistry – Symposium for the 50th Anniversary of the Stoddart Group*, Nottingham, United Kingdom, June 25, **2017**.
- (69) **Keynote Lecture:** Synthesis, Processing and Function of Coplanar π -Conjugated Organic Polymers, *International Symposium of Materials Horizon*, Chinese Academy of Science, Beijing, China, June 3, **2017**.
- (70) Rigidifying and Coplanarizing π -Conjugated Molecules and Macromolecules, *Peking University*, Beijing, China, June 1, **2017**.

- (71) Molecular Coplanarity and Rigidity of π -Conjugated Organic Systems, *Zhejiang University*, Hangzhou, China, May 26, **2017**.
- (72) Harnessing Non-covalent Interactions for Functional Organic and Polymeric Materials, *The 253rd ACS National Meeting, Symposium for the Polymer Chemistry (RSC) Lectureship*, San Francisco, California, April 4, **2017**.
- (73) Structural Engineering of sp^2 Functional Polymer Materials at The Molecular and Nanoscopic Scales, *The 253rd ACS National Meeting, PMSE Young Investigator's Symposium*, San Francisco, California, April 3, **2017**.
- (74) Synthesis, Processing and Function of Coplanar π -Conjugated Organic Polymers, *The 253rd ACS National Meeting, Symposium of 2017 ACS Applied Polymer Science Award in Honor of Zhenan Bao*, San Francisco, California, April 2, **2017**.
- (75) Molecular Coplanarity of π -Conjugated Organic Systems: from Synthesis to Function, *Frontier Lectures for Materials Science, University of Chinese Academy of Science*, Beijing, China, January 9, **2017**.
- (76) Integrating Coplanarity, Rigidity, and Processability in Conjugated Macromolecules, *Department of Polymer Science, Fudan University*, Shanghai, China, January 6, **2017**.
- (77) Molecular Coplanarity of π -Conjugated Organic Systems: from Synthesis to Function, *New York University Abu Dhabi*, United Arab Emirates, December 4, **2016**.
- (78) Molecular Coplanarity of π -Conjugated Organic Systems: from Synthesis to Function, *Texas A&M University at Qatar*, Doha, Qatar, November 29, **2016**.
- (79) Synthesis and Solution Processing of Conjugated Ladder Polymers, *72nd ACS Annual Southwest Regional Meeting*, Galveston, Texas, November 10, **2016**.
- (80) Molecular Coplanarity of π -Conjugated Organic Systems: from Synthesis to Function, *The University of Texas at Dallas*, Texas, September 23, **2016**.
- (81) Synthesis and Solution Processing of Conjugated Ladder Polymers, *The 24th International Conference on Science and Technology of Synthetic Metals*, Guangzhou, China, June 30, **2016**.
- (82) Precision Synthesis and Solution Processing of Coplanar Conjugated Molecules and Polymers, *Yaohu Forum, Jiangxi Normal University*, Nanchang, China, June 16, **2016**.
- (83) Precision Synthesis and Solution Processing of Coplanar Conjugated Molecules and Polymers, *Tianjin University*, Tianjin, China, June 7, **2016**.
- (84) Ladder-Type Conjugated Polymers with Conformational Precision, *14th Pacific Polymer Conference*, Kauai, Hawaii, Dec 12, **2015**.
- (85) Synthesis and Properties of Coplanar π -Conjugated Polymer Materials, *PTIC Consortium*, Polymer Technology Center, Texas A&M University, April 10, **2015**.
- (86) Controlling Molecular Conformation of Functional Macromolecular Materials, *The ACS 249th National Meeting*, PSME Symposium on Design Principles of Functional Macromolecular Materials, Denver, Colorado, March 22, **2015**.
- (87) Tailoring Properties of π -Conjugated Organic Materials by Conformational Control, *PTIC Consortium*, Polymer Technology Center, Texas A&M University, November 7, **2014**.
- (88) On the Molecular Engineering of Polymers for Artificial Muscles, Electronics, and Photovoltaics. *Jilin University*, Changchun, China, June 30, **2014**.
- (89) Side-Chain Engineering of Semiconducting Polymers for Plastic Solar Cells. *Wuhan University International Forum for Interdisciplinary Sciences and Engineering*, Wuhan, China, June 15, **2014**.
- (90) On the Molecular Engineering of Polymers for Artificial Muscles, Electronics, and Photovoltaics. *ShanghaiTech University*, Shanghai, China, June 10, **2014**.
- (91) Side-Chain Engineering of Semiconducting Polymers for Plastic Solar Cells. *The 6th International Symposium on Polymer Chemistry*, Shanghai, China, June 6, **2014**.
- (92) On the Molecular Engineering of Polymers for Artificial Muscles, Electronics, and Photovoltaics. *Department of Polymer Science and Engineering, Zhejiang University*, Hangzhou, China, June 4, **2014**.
- (93) On the Molecular Engineering of Polymers for Artificial Muscles, Electronics, and Photovoltaics. *Department of Chemistry Seminar, Hong Kong Baptist University*, Hong Kong, May 30, **2014**.

- (94) On the Molecular Engineering of Polymers for Artificial Muscles, Electronics, and Photovoltaics. *The 247th ACS National Meeting, Tosoh Workshop*, Dallas, Texas, March 18, **2014**.
- (95) Molecular Engineering of Semiconducting Polymers. *The 247th ACS National Meeting, ACS Award in Polymer Chemistry Symposium in Honor of Karen L. Wooley*, Dallas, Texas, March 17, **2014**.
- (96) Molecular Engineering of Semiconducting Polymers. *PTIC Consortium*, Polymer Technology Center, Texas A&M University, Oct 25, **2013**.
- (97) Covalent Assembly of Conductive Organic Components for Single-Molecule Electronics. *The 2012 Center of the Chemistry for Integrated System Symposium*, Evanston, Illinois, May 26, **2012**.

Awarded Research Support

- Al-Hashimi, M.; Fang, L.; Banerjee, S.; Al-Hail, S., Non-Flammable Aqueous Zinc Batteries for Integrated Power Management in Autonomous and Manned Vehicles, *Qatar National Research Fund (ARG01-0522-230270)*, \$739,575 (\$144,000 to Fang), **April 2024 – March 2027**.
- Almeer, S.; Fang, L.; Banerjee, S.; Al-Hashimi, M., Nanocomposite Coatings to Preserve the Structural Integrity of Strategic Assets in Extreme Environments, *Qatar National Research Fund (ARG01-0525-230352)*, \$739,761 (\$145,000 to Fang), **April 2024 – March 2027**.
- Fang, L. Gu, X. Collaborative Research: Syntheses and Solution-Phase Properties of Rigid Conjugated Ladder Polymer Chains, *National Science Foundation (CHE- 2304968)*, \$325,000, **September 2023 – August 2026**.
- Fang, L., Surfactant-Assisted on-Acid Interfacial Polymerization of Porous Polymer Membranes for Organic Solvent Nanofiltration, *National Science Foundation (CBET-2300453)*, \$366,553, **July 2023 – July 2026**.
- Fang, L, Synthesis, Coordination Chemistry, and Catalysis of Fully Fused Polypyridine Ligands, *The Robert A. Welch Foundation*, \$300,000 / **June 2022 – May 2025**.
- Fang, L. Humboldt Fellowship for Experienced Researcher, *Alexander von Humboldt Foundation*, ~\$56,000 / **February 2022 – August 2024**.
- Laganowsky, A.; Fang, L. Developing New Tools to Probe Membrane Protein-Lipid Interactions for Biomedical Applications, *National Institutes of Health (1R01GM139876-01)*, \$1,158,684 (\$303,000 to Fang) / **September 2021 – August 2025**.
- Fang, L. Collaborative Research: Synthesis and Rigidity Quantification of Ladder Polymers with Controlled Structural Defects (In Collaboration with Xiaodan Gu @ University of Southern Mississippi), *National Science Foundation (CHE-2003733)*, \$377,007 / **September 2020 – August 2023**.
- Fang, L. Senior Visiting Scholarship on “Helical Supramolecular Self-Assembly Systems Based on Dynamic Donor-Acceptor Interactions”, *Fudan University*, RMB 80,000 (~\$11,500) / **January 2020 – November 2021**.
- Banerjee, S.; Fang, L. *et al.* (13 co-PIs); A Brain-inspired Approach to Rapid and Energy Efficient Information Processing: AI on the Fly, *Texas A&M University X-Grant*, \$1,500,000 (~\$60,000 to Fang) / **September 2019 – August 2023**.
- Fang, L. Centripetal Aza-Circulene and Aza-Helicenes, *The Robert A. Welch Foundation (A-1898)*, \$240,000 / **June 2019 – May 2022**.
- Fang, L.; *et al.* (6 co-PIs) Mol: An Interactive Learning Platform for Difficult Organic Chemistry Concepts, *National Institutes of Health SBIR (R44 GM133273-02)*, \$120,959 (\$45,595 to Fang) / **September 2019 – August 2021**.
- Fang, L.; Sue, H.-J.; Borazjani, I. Advanced Mechanical Performances of Polymer Composites Promoted by Rigid-Ladder Molecules, *Texas A&M Triads for Transformation (T3) (Project ID 1047)*, \$30,000 (\$10,000 to Fang) / **January 2019 – December 2019**.
- Fang, L.; Wang, S. Scalable Reverse Osmosis Membrane with Gradient Porosity for Energy-Efficient Water Desalination, *TAMU College of Science Strategic Transformative Research Program*, \$49,500 (\$24,750 to Fang) / **January 2019 – December 2019**.

- Al-Hashimi, M.; Fang, L.; Banerjee, S. High Performance Multifunctional Smart Windows Using Novel Thermochromic Materials for Energy Conservation, *Qatar National Priority Research Program (NPRP11S-1204-170062)*, \$600,000 (\$102,719 to Fang) / **January 2019 – January 2022.**
- Fang, L. Synthesis Agreements, *Ningbo Kunpeng Environment Sci-Tech Co., Ltd* \$80,000 / **June 2018 – May 2019.**
- Fang, L. Synthesis Agreement, *Kaneka Americas Holding, Inc.* \$8,000 / **June 2018 – July 2019.**
- Tu, X.; Fang, L. Collaborative Research on Functional Porous Materials for Environmental Remediation, Nanchang Hangkong University, RMB 200,000 (~\$28,000) / **June 2018 – May 2021.**
- Klajn, R.; Fang, L. Switchable Nanomaterials by Integrating Molecular Machinery with Metallic Nanoparticles, *Weizmann - Texas A&M University Collaborative Program*, \$47,522 (\$23,761 to Fang) / **January 2018 – December 2019.**
- Al-Hashimi, M.; Fang, L.; Banerjee, S. Environmental Monitoring of Hydrocarbons using a Selective, Sensitive and Trainable Electronic BTEX Sensing Platform Integrating Nanoporous Polymer Receptors and Carbon Nanotubes, *Qatar National Priority Research Program, (NPRP10-0111-170152)*, co-funded by *Total S.A.*, \$694,022 (\$120,588 to Fang) / **January 2018 – January 2022.**
- Laganowsky, A.; Fang, L. Next Generation Detergents for Biophysical Studies of Membrane Proteins, *TAMU College of Science Strategic Transformative Research Program*, \$49,900 (\$24,950 to Fang) / **June 2017 – May 2018.**
- Fang, L. CAREER: Conformational Control of pi-Conjugated Polymeric Materials through Dynamic Bonds, *National Science Foundation (DMR-1654029)*, \$559,818 / **June 2017 – August 2022.**
- Naraghi, M.; Fang, L. Renewable and Low-cost Carbon Nanofibers for Energy Sector, *Texas A&M Energy Institute*, \$50,000 (\$25,000 to Fang) / **July 2016 – June 2017.**
- Fang, L. π -Conjugated Macrocyclic Molecular Belts, *The Robert A. Welch Foundation (A-1898)*, \$195,000 / **June 2016 – May 2019.**
- Matenoglou, G.; Fang, L.; Banerjee, S.; Bazzi, H. Molecular Engineering of 2D Catalysts for Hydrodesulfurization: Upgradation of Fossil Fuels, *Qatar National Priority Research Program (NPRP9-160-2-088)*, \$686,925 (\$118,256 to Fang) / **Sept 2016 – August 2019.**
- Al-Hashimi, M.; Fang, L.; Bergbreiter, D. Synthesis and Molecular Engineering of Novel Conjugated Polymers with Zero Torsional Defect for Organic Solar Cells, *Qatar National Priority Research Program (NPRP7-285-1-045)*, \$889,773 (\$315,000 to Fang) / **February 2015 – January 2018.**
- Fang, L. Bottom-Up Synthesis of Freestanding Two-Dimensional Polymers with Long-Range Order, *ACS Petroleum Research Fund, Doctoral New Investigator (PRF# 54249-DNI7)*, American Chemical Society, \$110,000 / **September 2014 – August 2017.**
- Zhu, C.; Stang, P.; Fang, L. *Heep Graduate Fellowship*, Texas A&M Institute for Advanced Studies, \$40,000 / **January 2014 – December 2014.**
- Fang, L.; Stoddart, J. F. Research Funds for Ryan Fellow, *Northwestern University*, \$7,500 / **2008–2010.**

Courses Taught

CHEM 689: Advanced Polymer Chemistry	Spring 2024
CHEM 228: Organic Chemistry II	Spring 2020
CHEM 646: Physical Organic Chemistry	Fall 2019, Fall 2020, Fall 2021, Fall 2022
CHEM 466: Polymer Chemistry	Spring 2015, Spring 2016, Spring 2017
CHEM 234: Organic Synthesis & Analysis IV	Fall 2016, Spring 2018, Spring 2021
CHEM 227: Organic Chemistry I for Chemistry Majors	Fall 2015
CHEM 227: Organic Chemistry I	Fall 2013, Fall 2014, Fall 2018

Other Teaching and Outreach Activities

NSF Supported Summer Science Camp for High School Students in Brazos County, TX	2021~
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Development of Undergraduate Organic Laboratory on “Nobel Prize Reactions”	2020~
Mentor for AggieE-Challenge Project “Engineering Novel Membranes for Energy-Efficient Water Desalination” for Undergraduate Research, lead PI: Shiren Wang	2018~2019
Guest Lectures: Texas A&M University in Qatar	November 2017
Virtual Reality of Chemistry Demonstrations, Chemistry Open House of TAMU	October 2017, 2018
Advisor: Phi Lambda Upsilon Honorary Chemical Society TAMU	2015~
Faculty Research Advisor: Undergraduate Research Scholar Julia Taylor	2015~2016
Mentor: STEM Teaching Profession Development (SCEN 677) for Adriana Pavia Sanders (Spring 2015); Fuwu Zhang (Spring 2019)	
Guest Lecture for First-Year Regent Scholars in the Chemistry Department of TAMU	March 4, 2015
Guest Lectures: Organic Chemistry II, <i>TAMU Corpus Christi</i>	March 30, 31, 2014
Coordinator: Graduate Literature Seminar (CHEM681), <i>TAMU</i>	Fall 2013, Spring 2014, Fall 2014
Mentor: Stanford Undergraduate Visiting Research Program	Summer 2012
Mentor: NSF-iREU Program in Chemistry	2010
Teaching Assistant: Organic Chemistry Labs (CHEM30BL&30CL), <i>UCLA</i>	2006~2007

University and Department Service

Associate Head of Graduate Studies, TAMU Chemistry Department	2023~
Junior Faculty Mentoring, Shuyi Xie, Department of Chemical Engineering	2023~
Reviewer, Avilés-Johnson Fellowship Program	2023, 2024
Graduate Advisor, Department of Chemistry	2021~2023
Chair of the Graduate Program Committee, Department of Chemistry	2021~
Member of the Graduate Instruction Committee, College of Science	2021~
Member of the Academic Operation Committee, Department of Chemistry	2020~
Chair of the Organic Division, Department of Chemistry	2020~2022
Member of the Committee for Master Program, Department of Chemistry	2020~
Member of the Executive Committee, Department of Chemistry	2020~2022
Member of TAMU Qatar Chemistry Field Appropriate Sub-Committee	2020~2022
Member of the Self-Study Committee for Chemistry Department Academic Program Review	2019~2020
Chair of the Chemistry Mass Spectrometry User Committee	2018~2021
Member of Graduate Curriculum Committee, Department of Materials Science & Engineering	2018~2019
Member of the Committee for Covestro Distinguished Lectureship at TAMU	2017~
Treasurer, Texas A&M Local Section of the American Chemical Society	2017~2019
Chemistry NMR User Committee Member	2017~
Organic Faculty Candidate Search Committee	2017, 2018
Contributed to the funded proposal to TAMU Research Development Fund: “Establishing a Multidisciplinary Soft Matter Facility” (\$1,500,000 Support)	2016
Chemistry Undergraduate Awards Committee Member	2016~2022
Chemistry Mass Spectrometry User Committee Member	2015~2018
Departmental Seminar Committee Member	2014~2017
Organic Divisional Seminar Coordinator	2014~2017
Interdisciplinary Faculty Search Committee Member	2014

External Scientific Committees and Professional Activities

Host of Arab-American Frontiers Fellowship for Dr Dinesh Shetty	2024
Co-Organizer, Symposium of “Beyond Single-Bond Macromolecules: Advances in Ladder and Framework Polymers and Their Applications”, Pacificchem	2025

Co-Organizer, PMSE Symposia of “Climbing Macromolecular Ladders: Elevating the Design, Synthesis, Properties, and Applications of Ladder Polymers”, ACS National Meeting **Fall 2024**

Co-Organizer, PMSE Symposia of “Functional Conjugated Polymers: From Fundamental Synthetic and Physical Chemistry to Emerging Applications”, ACS National Meetings **Fall 2020, Fall 2022, Spring 2024**

Invited Attendee, the 9th Arab-American Frontiers Symposium of Science, Engineering & Medicine, Doha, Qatar **2023**

Secretary, Chinese-American Chemistry & Chemical Biology Professors Association (CAPA) **2023~**

Proposal Reviewer, Engineering and Physical Sciences Research Council, UK Research and Innovation **2023**

Proposal Reviewer, European Research Council (ERC) Consolidator Grant **2023**

Co-Organizer, 1st Texas Pore Engineering Conference, College Station **December, 2022**

Review Panelist, NSF Graduate Research Fellowship Program **2014, 2021, 2023**

Proposal Reviewer, US Department of Energy **2021**

Invited Attendee, 8th Arab-American Frontiers Symposium of Science, Engineering & Medicine, Virtual **2021**

Proposal Reviewer, US Army Research Office **2020**

Proposal Reviewer, Deutsche Forschungsgemeinschaft **2020**

Proposal Reviewer, ORAU Ralph E Powe Junior Faculty Enhancement Awards **2020**

Technical Advisory Committee Member, National-Local Joint Engineering Research Center for Heavy Metal Pollutant Control and Resource Utilization, *Nanchang Hangkong University* **2020**

Advisory Editorial Board Member, *Molecular Systems Design & Engineering* **2020~**

Editorial Board Member, *Journal of Polymer Science* **2020~**

Guest Editor of Themed Issue for *Polymers* (MDPI) **2019~2020**

Co-Chair, Symposium of “Novel Functional pi-Systems and Materials”, 10th Singapore International Chemical Conference (SICC-10) **December 2018**

Invited Attendee of the 6th Symposium of Arab-American Frontiers of Science, Engineering & Medicine, Kuwait City **November 2018**

Flexible Joint Professor, Key Laboratory of Jiangxi Province for Persistent Pollutants Control and Resources Recycle, College of Environmental and Chemical Engineering, Nanchang Hangkong University **2018~2021**

Co-Organizer, PMSE Symposium of “Synthesis, Processing and Device Engineering of Electronic Polymeric Materials”, ACS National Meetings San Francisco **Spring 2017, Boston Fall 2018**

Guest Editor for APL Materials, Special Topic Issue Advances in Flexible and Soft Electronics **2018**

Co-Founder, Ningbo Kunpeng Environmental Sci-Tech, Ltd **2017**

Session Chair, The 13th International Symposium on Functional π -Electron Systems, Hong Kong **2017**

Proposal Reviewer, US-Israel Binational Science Foundation **2017**

Proposal Reviewer, National Science Foundation **2016~**

Discussion Leader, Gordon Conference of Hybrid Electronic & Photonic Materials, Hong Kong **June 2016**

ACS National Award Selection Committee **2016~2018**

Review Panelist, National Defense Science and Engineering Graduate Fellowship **2016, 2017**

Proposal Reviewer, ACS Petroleum Research Fund **2015~**

Discussion Leader, Gordon Conference of Polymer Chemistry, Mountain Holyoke, MA **June 2015**

Session Presiding, PMSE Symposium: Design Principles of Functional Macromolecular Materials, ACS National Meeting, Denver, **March 24, 2015**

Session Chair, The 6th International Symposium on Polymer Chemistry, Shanghai, China, **June 5, 2014**

Reviewer for Doctoral Fellowship Programme of the Austrian Academy of Sciences **2014**

Proposal Review Board Panelist, Organic and Macromolecular Synthesis Facility, Molecular Foundry, Lawrence Berkeley National Laboratory **2014~2019**

Proposal Study Panelist, Molecular Foundry, Lawrence Berkeley National Laboratory **2013~2014**