Xiong Gong, Ph. D.
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Google Scholar: https://scholar.google.com/citations?user=XG6dlLAAAAAJ&hl=en

Editorial Board Member, Scientific Reports (published by Nature)
Associate Editor, Emergent Materials (published by Elsevier)
Editorial Board Member, Chinese Chemistry Letter (published by Springer)
Editorial Board Member, Polymers (published by MDPI)

HIGHLIGHT ACCOMPLISHMENTS

- Scientific Contributions
  - 213 articles published in the peer reviewed journals including in Science
  - 126 articles published in the peer reviewed journals since August 2010 after joining The University of Akron
  - Over 23600 peers citations from above 213 articles, and H-index of 64.
  - 24 granted patents plus 8 pending patents.
  - 8 book chapters
  - 161 invited talks in conferences and academic institutions.
- Research Grants at The University of Akron
  - Funding: >$6 M as a single PI since 2012
- Teaching at UA
  - Developed and taught four new courses for graduate students in the College of Polymer Science and Polymer Engineering
  - Taught one course for undergraduate students in the Department of Mechanical Engineering
  - Taught one core course for graduate students in the Department of Polymer Engineering
  - Teaching evaluation rates rank one of top list in the College of Polymer Science and Polymer Engineering for last 8 years

AWARDS AND HONORS

- 2017-2018 Outstanding Researcher Award, The University of Akron
- Top 1 % Highly Cited Researcher by Thomson Reuters (2016)
- Top 1 % Highly Cited Researcher by Thomson Reuters (2015)
- The World's Most Influential Scientific Minds 2014 (2015)
- Top 1 % Highly Cited Researcher by Thomson Reuters (2014)
- NSF CAREER award (2014)
- 3M Non-tenured Faculty Award (2011)
- The University of Akron, Summer Research Award (2011)
- K. C. Wong Education Foundation Fellow (2009)

- Alexander von Humboldt Research Fellowship (1999)

EMPLOYMENT

- May 2017 – present, Full Professor, Department of Polymer Engineering, College of Polymer Science and Polymer Engineering, The University of Akron, Akron, OH
- May 2015 – May 2017, Associate Professor, Department of Polymer Engineering, College of Polymer Science and Polymer Engineering, The University of Akron, Akron, OH,
- August 2010 – May 2015 Assistant Professor, Department of Polymer Engineering, College of Polymer Science and Polymer Engineering, The University of Akron, OH
- January 2005 - August 2010 Senior Research Scientist, Center for Polymers and Organic Solids, University of California, Santa Barbara, CA
- January 2004 - August 2010 Manager and Senior Scientist, CBrite, Inc. Goleta, CA

EDUCATION AND PROFESSIONAL TRAINING

- April 2001- December 2003 Post-doctoral Fellow and Research Assistant
  Center for Polymers and Organic Solids, University of California, Santa Barbara, with Professor Alan J. Heeger (2000 Nobel Laureate)
  Minor (graduate courses) in Electric Engineering, UC Santa Barbara
- June 1999 - January 2000 Research Fellow
  Alexander von Humboldt Foundation**,** Cari-Zeis Optical Institute, Jena, Germany
- August 1994 - July 1997, Ph. D. Physics (Optics)
  Optics Institute, Nankai University, P, R. China
  Dissertation: Optical (linear and nonlinear) properties of rare-earth doped inorganic nanoparticles
  Advisors: Prof. Wenju Chen
- August 1991 - July 1994, M. Sc**.** Chemistry (Solid State Chemistry)
  Departments of Chemistry and Materials Science**,** Lanzhou University, P, R. China,
  Dissertation: The effect of y-ray irradiation on catalytic properties of rare-earth doped inorganic nanostructured materials
  Advisors: Prof. Zhongqian Ma and Prof. Hongxie Yang
- August 1982 - July 1986. B. Sc. Chemistry
  Department of Chemistry, Northwest Normal University, P. R. China
  Project: Ru-coordination compounds and its medical applications
  Supervisor: Prof. Yuchen Pan

RESEARCH INTERESTS AND EXPERTISE

- Perovskite materials for energy generation,
- Organic/polymer electronics and optoelectronics for energy generation and storage,
- Organic/perovskite thermoelectric materials and devices,
- Graphene and 2D materials based supercapacitors
- Self-powered electronics,
- Chemistry and physics of semiconducting organic/polymer materials
- Chemistry and physics of inorganic quantum dots and nanoparticles

- Optical spectroscopy

GRANTS

1. Current grants

- NSF
  Title: Bulk heterojunction perovskite solar cells by novel perovskite materials
  Award Amount: $475,000
  Role: PI
  Period: July 2019 - June 2022
- Air Force Scientific Research
  Title: Uncooled broadband solution-processed photodetectors
  Total Award Amount: $819,543
  Role: PI
  Period: sept. 2015 - Aug. 2020
- NSF
  Title: Ultrasensitive solution-process inverted polymer photodetectors
  Award Amount: $408,000
  Role: PI
  Period: July 2014 - December 2019
- 1 -Material Inc.
  Title: "Novel Polymers: Characterization and Applications"
  Award Amount: $250,000
  Time period: July 2015 - December 2019
  Role: PI
- Air Force Scientific Research
  Title: Trust in Flexible and Hybrid Electronics
  Total Award Amount: $1 .78M
  Role: Co-Pl)
  Period: sept. 2017 - Aug. 2020

2. Pending proposals

- Title: Hysteresis-free, stable and efficient solution-processed perovskite solar cells through hybrid perovskites crosslinked with polymers
  Source: DOE
  Role: PI
  Total Award Amount: $250,000

152Title: Efficient perovskite solar cells by hybrid perovskite materials incorporated with heterovalent rare earth cations
Source: DOE
Role: PI
Total Award Amount: $250,000

3. Past grants

- Mitsubishi Chemical Corporation
  Title: High performance electrophosphorescenct polymer light-emitting diodes
  Award Amount: $1,500,000

Time period: Aug. 2001 - Aug. 2006
Role: Project Assistant (PI: Prof. A. J. Heeger)

- DARPA
  Title: Hemispherical Array Detector for Imaging
  Award Amount: $22,500,000
  Time period: July 2007 - Aug. 2010
  Role: Project manager (PI: Prof. A. J. Heeger)
- The University of Akron
  Title: Organic electronics
  Award amount: $500,000
  Time period: Aug. 2010 - July 2014
  Role. PI
- The University of Akron
  Title: POSS-polymer for flexible electronics
  Award Amount: $10,000
  Time period: July 2012 - Aug. 2012
  Role: PI
- DOE
  Title: In-situ Neutron Scattering Determination of 3D Phase-Morphology Correlations in Fullerene-Block Copolymer Systems Block Copolymer System
  Award Amount: $831,066
  Time period: Sept. 2012 — Aug. 2014
  Role: Co-PI
- 3M Company
  Title: Polymer electronics
  Award Amount: $45,000
  Time period: July 2011 - June 2014
  Role: PI
- BringSpring Science and Technology
  Title: "High Performance Inverted Polymer Solar Cells"
  Award Amount: $600,000
  Time period: March 2013 - March 2016
  Role: PI
- System Seals Inc,
  Title: Polymer processing
  Award Amount: $11, 658
  Time period: Feb. 2013 - sept. 2013
  Role: PI
- Bayer MaterialScience
  Title: "Special Bayer Lectureship" 2013
  Award Amount: $8,000
  Role: PI
- Aldrich Material Science
  Title "Special Aldrich Lectureship" 2014

Award Amount: $3,500
Role: PI

PUBLICATIONS

2020

213 T. Zhu, Y. R. Yang, **X. Gong***
Recent Advancements and Challenges for Low-Toxic Perovskite Materials
ACS, Appl. Mater. Interf., 2020, DOI: 10.1021/acsami.0c02575.

212 L. Y. Zheng, K. Wang, T. Zhu, Y. R. Yang, R. Chen, K. Gu, C. M. Liu, **X. Gong***
High-Performance Perovskite Solar Cells by One-Step Self-Assembled Perovskite-Polymer Thin Films
ACS, Appl. Eng. Mater., 2020, DOI: 10.1021/acsaem.0c00823

211 Y. L. Liu, D. Zhang, B. P. Ren, **X. Gong**, L. J. Xu, F. A. Zhang, Y. Chang, Y. He, and J. Zheng
Molecular simulations and understanding of antifouling zwitterionic polymer brushes
J. Mater. Chem. B, 2020, 36(11), 2757-2766.

210 T. Zhu, Y. R. Yang, X. Yao, Z. X. Huang, L. Liu, W. P. Hu, **X. Gong***
Solution-Processed Polymeric Thin Film as the Transparent Electrode for Flexible Perovskite Solar Cells
ACS, Appl. Mater. Interf., 2020, DOI:10.1021/acsami.9b22891.

209 W. Z. Xu, T. Zhu, Y. R. Yang, L. Y. Zheng, L. Liu, **X. Gong***
Enhanced Device Performance of Perovskite Photovoltaics by Magnetic Field Aligned Perovskites-Magnetic Nanoparticles Composite Thin Film
Adv. Func. Mater., 2020, DOI:10.1002/adfm.202002808.

208 Y. L. Liu, D. Zhang, B. P. Ren, **X. Gong**, A. Liu, Y. Chang, Y. He, J. Zheng
Computational Investigation of Antifouling Property of Polyacrylamide Brushes
Langmuir, 2020, 36(11), 2757-2766.

207 T. Zhu, Y. R. Yang, L. Y. Zheng, L. Liu, M. L. Becker* and **X. Gong***
Solution-Processed Flexible Broadband Photodetectors with Solution-Processed Transparent Polymeric Electrode
Adv. Func. Mater., 2020, DOI: 10.1002/adfm.201909487.

206 T. Zhu, Y. R. Yang, S. Y. Zhou, X. Liu and **X. Gong ***
Bulk Heterojunction Perovskite Solar Cells Incorporated with Solution-Processed TiO_X Nanoparticles as the Electron Acceptors
Chinese Chemical Letters, 2020, CCLET-D-19-01800R1.

205 L. Y. Zheng, W. Z. Xu, X. Yao, T. Zhu, and **X. Gong ***
Ultrasensitive and high gain solution-processed perovskite photodetectors by $CH_3NH_3PbI_{2.55}Br_{0.45}$:$Zn_2SnO_4$ bulk heterojunction composite
Emergent Materials, 2020, DOI: 10.1007/s42247-020-00072-7.

2019

204 K. Wang, L. Y. Zheng, T. Zhu, L. Liu, M. L. Becker* and **X. Gong ***
High performance perovskites solar cells by hybrid perovskites co-crystallized with poly(ethylene oxide)
Nano Energy, 2019, 10.1016/j.nanoen.2019.104229.

203 D. Zhang, F. Y. Yang, J. He, L. J. Wang, Z. Q. Feng, Y. Chang, **X. Gong,** G. Zhan g, J. Zheng
Multiple Physical Bonds to Realize Highly Tough and Self-Adhesive Double-Network Hydrogels
ACS Applied Polymer Materials, 2019, DOI:10.1021/acsapm.9b00889

202 B. P. Ren, Y. X. Zhang, M. Z. Zhang, Y. L. Liu, D. Zhang, **X. Gong,** Z. Q. Feng, J. Xin, Y. Chang, J. Zheng
Fundamentals and introductory of cross-seeding of amyloid protein
J. Mater. Chem. B., 2019, DOI: 10.1039/c9tb01871a.

201 Xiang Yao, Luyao Zheng, Xiaotao Zhang, Wenzhan Xu, Wenping Hu, **Xiong Gong***
Efficient perovskite solar cells through suppressed non-radiative charge carrier recombination by processing additive
ACS Appl. Mater. Interf., 2019, DOI: 10.1021/acsami.9b15607.

200 Suyuan Zhou, Tao Zhu, Luyao Zheng, Dong Zhang, Wenzhan Xu, Lei Liu, Gang Cheng, Jie Zheng and **Xiong Gong***
Zwitterionic Polymer as an Interfacial Layer for Efficient and Stable Perovskite Solar Cells
RSC Advance, 2019, 9, 30317-30324.

199 Y. Wang, J. H. Wu, D. Zhang, F. Chen, P. Fan, M. Q. Zhong, S. W. Xiao, Y. Chang, **X. Gong,** J. Zheng
Design of salt-responsive and regenerative antibacterial polymer brushes with integrated bacterial resistance, killing, and release properties
J. Mater. Chem. B., 2019, DOI:10.1039/c9tb01313j.

198 Tao Zhu, Luyao Zheng, Zuo Xiao, Xianyi Meng, Lei Liu, Liming Ding, **Xiong Gong***
Functionality of Non-Fullerene Electron Acceptors in Ternary Organic Solar Cells.
Solar RRL, 2019, doi: 10.1002/solr.20190032.

151 Wenzhan Xu, Luyao Zheng, Tao Zhu, Lei Liu and **Xiong Gong***
Bulk Heterojunction Perovskite Solar Cells Incorporated with Zn_2SnO_4 Nanoparticles as the Electron Acceptors,
ACS Applied Materials & Interfaces, 2019, DOI: 10.1021/acsami.9b12346

196 L. Y. Zheng, K. Wang, T. Zhu, L. Liu, J. Zheng, and **X. Gong,***
Solution-processed ultrahigh detectivity photodetectors by hybrid perovskite incorporated with heterovalent neodymium cations
ACS Omega, 2019, DOI: 10.1021/acsomega.9b01797.

195 Z. Y. Chen, Y. R. Yang Z. H. Ma, T. Zhu, L. Liu, J. Zheng and **X. Gong***
All-solid-state asymmetric supercapacitors with metal selenides electrodes and ionic conductive composites electrolytes
Adv. Func. Mater., 2019, DOI: 10.1002/adfm.201904182

194 T. Zhu, L. Y. Zheng, C. Yi, T. Z. Yu, Y. Cao, L. Liu, **X. Gong**,*

Two Dimensional Conjugated Polymeric Nanocrystals for Organic Electronics
ACS Applied Electronic Materials, 2019, DOI: 10.1021/acsaelm.9b00260.

193 K. Wang, L. Y. Zhang, T. Zhu, X. Yao, C. Yi, X. T. Zhang, Y. Cao, L. Liu, W. P. Hu, and **X. Gong***
Efficient Perovskite Solar Cells by Hybrid Perovskites Incorporated with Heterovalent Neodymium Cations
Nano Energy, 2019, 61, 352-360.

192 T. Zhu, L. Y. Zhang, S Yao, F. Huang, Y. Cao, L Liu, **X. Gong***
Ultrasensitive Solution-Processed Broadband PbSe Photodetectors through Photomultiplication Effect
ACS Appl. Mater. Interf., 2019, 11, 9205-9212.

191 Z. Y. Chen, L. Y Zheng, Te Zhu, Z. H. Ma, Y. R Yang, C. D. Wei, L. Liu, **X. Gong***
All-Solid-State Flexible Asymmetric Supercapacitors Fabricated by the Binder-Free Hydrophilic Carbon Cloth@MnO_2 and Hydrophilic Carbon Cloth@PoIypyrrole Electrodes
Adv. Elec. Mater., 2019, DOI: 10.1002/aelm.201800721.

190 **X. Gong***
Organic field-effect optical waveguides: a new break-through all organic optoelectronics
SCIENCE CHINA Chemistry, 2019, DOI: 10/1007/s11426-018-9406-1.

189 H. C. He, X. Xuan, C. Y. Zhang, Y. Song, S. F. Chen, X. **Gong,** B. P. Ren, J. Zheng
Simple Thermal Pretreatment Strategy to Tune Mechanical and Antifouling Properties of Zwitterionic Hydrogels
Langmuir, 2019, 35, 1828-1836.

2018

188 J. Qi, X. Yao, W. Z. Xu, J. Xiao, X. F. Jiang, **X. Gong**,* Y. Cao
Efficient Perovskite Solar Cells with Reduced Photocurrent Hysteresis through Tuned Crystallinity of Hybrid Perovskite Thin Films
ACS Omega, 2018, 3, 7069-7076.

187 L. Y. Zheng, T. Zhu, W. Z. Xu, J. Zheng, L. Liu, and **X. Gong***
Ultrasensitive perovskite photodetectors by Co partially substituted hybrid perovskite
ACS Sust. Chem. Eng., 2018, 6,12055-12060.

186 T. Y. Meng, C. Yi, L. Liu, A. Karim and **X. Gong***
Enhanced thermoelectric properties of two-dimensional conjugated polymers, **Emergent Materials**, 2018, DOI: 10.1007/s42247-018-0002-4.

185 B. P. Ren, Y. L. Liu, Y. X. Zhang, Y. Q. **X. Gong**, J. Zheng,
Genistein: A Dual Inhibitor of Both Amyloid β and Human Islet Amylin Peptides
ACS Chemical Neuroscience, 2018, 9, 1215-1224.

184 L. Y. Zheng, T. Zhu, W. Z. Xu, L. Liu, J. Zheng, **X. Gong**,* F. Wudl
Solution-processed broadband polymer photodetectors with spectral response up to 2.5 μm by a low bandgap donor-acceptor conjugated polymer
J. Mater. Chem. C., 2018, 6, 3634-3641.

183 X. Yao, J. Qi, W. Z. Xu, X. F. Jiang, **X. Gong**,* Y. Cao

Cesium-doped vanadium oxide as the hole extraction layer for efficient perovskite solar cells
ACS Omega, 2018, 3, 1117-1125.

182 W. Z. Xu, L. Y. Zheng, X. T. Zhang, C. Yi, W. P. Hu, **X. Gong***
Efficient perovskite solar cells fabricated by Co partially substituted hybrid perovskite
Adv. Eng. Mater., 2018, DOI:10.1002/aenm.201703178.

2017

181 W. Z. Xu, Y. K. Guo, X. T. Zhang, L. Y. Zheng, T. Zhu, D. H. Zhao, W. P. Hu, **X. Gong***
Room-temperature operated ultrasensitive broadband photodetectors by perovskite incorporated with conjugated polymer and single wall carbon nanotubes,
Adv. Func. Mater., 2017, DOI:10.1002/adfm.201705541.

180 L. Y. Zheng, S. Mukherjee, K. Wang, M. E Hay, B. W, Boudouris and **X. Gong***
Radical polymers as interfacial layers in inverted hybrid perovskite solar cells
J. Mate. Chem. A, **2017**, 5, 23831-23839.

179 J. Ma, Y. R. Sun, M. Z. Zhang, M. X. Yang, X. **Gong,** F**.** Yu, J. Zheng
Comparative Study of Graphene Hydrogels and Aerogels Reveals the Important Role of Buried Water in Pollutant Adsorpti,
Environmental Science & Technology, 2017, 51(21), 12283-12292.

178 X. Yao, W. Z. Xu, X. J. Huang, J. Qi, Q. W. Yin, X. F. Jiang, F. Huang, **X. Gong**,* and Y. Cao
Solution-processed vanadium oxide thin film as the hole extraction layer for efficient hysteresis-free perovskite hybrid solar cells
Organic Electronics, 2017, 47, 85-93.

177 R. D. Hu, B. P. Ren, H. Chen, Y. L. Liu, L. Y. Liu, **X. Gong,** J. Zheng
Seed-induced heterogeneous cross-seeding self-assembly aof human and rat islet polypeptides
ACS Omega, 2017, 2, 784-792.

176 H. Peng, C. D. Wei, K. Wang, T. Y. Meng, G. F. Ma, Z. Q. Lei, **X. Gong**,*
The $Ni_{0.85}Se@MoSe_2$ nanosheet arrays as the electrode for high-performance supercapacitors
ACS Appl. Mater. Interfac., 2017, 9, 17067-17075.

175 W. Z. Xu, C. Yi, X. Yao, L. L. Jiang, **X. Gong**,* and Yong Cao
Efficient organic solar cells with polymer-small molecule: fullerene ternary active layers
ACS Omega, 2017, 2, 1786-1794.

174 X. Z. Xu, X. Yao, X. J. Huang, Fei Huang, **X. Gong***
Perovskite hybrid solar cells with fullerene derivative electron extraction layer
J. Mater. Chem. C, 2017, 5, 4190-4197.

173 X. J. Huang, W. Z. Xu, X. Yao, F. Huang, **X. Gong*** and Y. Cao
Inverted polymer solar cells with Zn2SnO4 nanoparticles as the electron extraction layer

Chinese Chemistry Letter, 2017, 28, 1755-1759.

172 W. Z. Xu, H. Peng, T. Zhu, C. Yi, L. Liu, **X. Gong***
Solution-processed near-infrared polymer:PbS QDs photodetectors
RSC Advances, 2017, 7, 34633-34637.

171 Y. Sun, P. Pitliya, C. Liu , **X. Gong**, D. Raghavan, A. Karim
Block copolymer compatibilized polymer: fullerene blend morphology and properties
Polymer, 2017, 113, 1-12.

170 W. Wang, Z. Zhang, C. Liu, Q. Fu, W.Z. Xu, C. W. Huang, R. A. Weiss, **X. Gong***
Efficient Polymer Solar Cells by Lithium Sulfonated Polystyrene as a Charge Transport Interfacial Layer
ACS Appl. Mater. Inter., 2017, 9, 5348-5357.

2016

169 J. Qi, W. Cao, L. Chen, L. W. Mu, H. Y. Wang, X. **Gong,** J. Zheng
Confined molecular motion across liquid/liquid interfaces in a triphasic reaction towards free-standing conductive polymer tube arrays
J. Mater. Chem. A., 2016, 4, 6290-6294.

168 C. Liu, H. Peng, K. Wang, C. D. Wei, Z. X. Wang, **X. Gong***
PbS Quantum Dots-Induced Trap-Assisted Charge Injection in Perovskite Photodetectors,
Nano Energy, **2016**, 30, 27-35.

167 C. Yi, L. Zhang, R. D. Hu, S. C. Chuang, J. Zheng, **X. Gong***
Highly electrically conductive polyethylenedioxythiophene thin films for thermoelectric applications
J. Mater. Chem. A., 2016, 4, 12730-12738.

166 H. Chen, F. Y. Yang, M. Z. Zhang, B. P. Ren, **X. Gong**, J. Ma, B. B. Jiang, Q. Chen, J. Zheng, R. D. Hu.
A Comparative Study of Mechanical Properties of Hybrid Double-Network Hydrogels at Swelling and As-Prepared States
J. Mater. Chem. B., 2016, 4, 5814-5824.

165 Y. P. Huang, W.Z. Xu, C. Zhou, Cheng; W. K. Zhong, R. B. Xie, **X. Gong**, L. Ying, F. Huang, Y. Cao
Synthesis of medium-bandgap π-Conjugated polymers based on isomers of 5- Alkylphenanthridin-6(5H)-one and 6-Alkoxylphenanthridine
J. Polymer Science, Part A: Polymer Chemistry，2016，54, 2119-2127.

164 Long Chen, Liwen Mu, Kai Wang, **X. Gong**, J. H. Zhu
Confined molecular motion across liquid/liquid interfaces in a triphasic reaction towards free-standing conductive polymer tube array
J. Material Chemistry A., 2016, 4, 6290-6294.

163 Kai Wang, Chang Liu, Tianyu Meng, Chao Yi, **Xiong Gong***
Inverted Organic Photovoltaic Cells
Chem. Soc. Rew., 2016, 45, 2937-2975.

162 N. Deb, B. H. Li, M. Skoda, S. Rogers, Y. Sun, **X. Gong**, A. Karim, B. Sumpter and D. G Bucknall

Harnessing Structure-Property Relationships for Poly(alkyl thiophene) Fullerene Derivative Thin Films to Optimize Performance in Photovoltaic Devices
Adv. Func. Mater., 2016, 26, 1908-1920.

161 W. Z. Xu, Y. T. Liu; X. J. Huang, L. L. Jiang, Q. D. Li; X. W. Hu, F. Huang, **X. Gong,*** Y. Cao
Solution-processed VO_X prepared from a novel synthetic method as the hole extraction layer for polymer solar cells
J. Mater. Chem. C, **2016**, 4, 1953-1958.

160 C. Liu, K. Wang, C. Yi, X. J. Shi, A. W. Smith, **X. Gong*** and A. J. Heeger
Efficient Perovskite Hybrid Photovoltaics via Alcohol-Vapor Annealing Treatment
Adv. Func. Mater., 2016**,** 26, 101-110.

159 T. Y. Meng, C. Liu, K. Wang, T. D. He, Y. Zhu, A. A. Elzatahry, **X. Gong***
High Performance Perovskite Hybrid Solar Cells with E-beam-Processed TiO_x Electron Extraction Layer
ACS Appl. Mater. Inter., 2016, 8, 1876-1883.

158 X. Huang, K. Wang, C. Yi, T. Y. Meng and **X. Gong***
Efficient Perovskite Hybrid Solar Cells by Highly Electrical Conductive PEDOT:PSS Hole Transport Layer
Adv. Eng. Mater., 2016, DOI:10.1002/aenm.201501773.

157 C. Yi, X. W. Hu, **X. Gong***
Interfacial Engineering for High Performance Organic Photovoltaics
Materials Today, 2016, 19, 169-177.

156 C. Liu, K. Wang, **X. Gong*** and A. J. Heeger
Low Bandgap Polymers for Polymeric Photovoltaics
Chem. Soc. Rev., 2016, 45, 4825-4846.

2015

155 P. Liu, S. Dong, F. Liu, X. W. Hu, Y. C. Jin; S. J. Liu; **X. Gong**, T. Russell, F. Huang, Y. Cao
Optimizing Light-Harvesting Polymers via Side Chain Engineering
Adv. Func. Mater., 2015, 25, 6458-6469.

154 K. Wang, C. Liu, C. Yi, L. Chen, J. H. Zhu, R. Weiss and **X. Gong***
Efficient Perovskite Hybrid Solar Cells via Ionomer Interfacial Engineering
Adv. Func. Mater., 2015, 25, 6875-6884.

153 P. C. Du, H. Liu, C. Yi, K. Wang, **X. Gong***
Polyaniline Modified Oriented Graphene Hydrogel Film as the Free-Standing Electrode for Flexible Solid-state Supercapacitors
ACS Appl. Mater. Interf., 2015, 7, 23932–23940.

152 S. X. Sun, Y. Huo, M. M. Li, X. W. Hu, Y. W. Zhang, X. L. **X. Gong**, H. L. Zhang,
Towards Understanding the Halogenation Effects in Diketopyrrolopyrrole based small Molecule Photovoltaics
ACS Appl. Mater. Interf., 2015, 7, 19914-19922.

151 M. Z. Zhang, R. D. Hu, H. Chen, **X. Gong**, F. M. Zhang J. Zheng

Polymorphic Associations and Structures of the Cross-Seeding of Aβ1-42 and hIAPP1-37 Polypeptides
J. Chem. Inform. Model., 2015, 55, 1628-1639.

150 C. Liu, K.Wang, P. C. Du, E. M. Wang and **X. Gong***
Ultrasensitive Solution-Processed Near-Infrared Photodetectors using $CH_3NH_3PbI_3$ and PbS Quantum Dots as the Light Harvesters
Nanoscale, 2015, 7, 16460 - 16469.

149 X. W. Hu, P. C. Du, K. Wang, C. Yi, C. Liu, **X. Gong*** and Y. Cao
Process Controllable Crystallization Morphology of Planar Heterojunction Perovskite Solar Cells with High Efficiency
J Photovoltaics, 2015, 5, 1402-1407.

148 C. Liu, K. Wang, P. C. Du, C. Yi, T. Y. Meng, **X. Gong***
Efficient Solution-Processed Bulk Heterojunction Perovskite Solar Cells
Adv. Energy Mater. 2015, DOI:10.1002/aenm.201402024.

147 K. Wang, C. Liu, P. C. Du, H. L. Zhang, and **X. Gong***
Efficient Perovskite Hybrid Solar Cells through Homogeneous High-Quality Organolead Iodide Layer
Small, 2015, 11, 3369-3376.

146 Q. D. Li, F. Liu, X. W. Hu, W. Z. Xu, L. P. Wang, X. H. Zhu, **X. Gong*,** and Y. Cao
Efficient Small-Molecule-Based Inverted Organic Solar Cells with Conjugated Polyelectrolyte as a Cathode Interlayer
J. Photovoltaics, 2015, 5, 1118-1124.

145 C. Liu, K. Wang, P. C. Du, C. Yi, T. Y. Meng, **X. Gong***
Solution-Processed Inverted Perovskite Hybrid Photodetectors
J. Mater. Chem. C. **2015**, 3, 6600-6606. (The Journal Front Cover)

144 K. Liu, C. L. Song, L. Y. Gup, C. Zhang, Y. Liu, **X. Gong**, H. L. Zhang
Tuning the ambipolar charge transport properties of N-heteropentacenes by their frontier molecular orbital energy levels
J. Mater. Chem. C, 2015, 3(16), 4188-4196.

143 P. C. Du, X. W. Hu, C. Yi, H. C. Liu, P. Liu, H. L. Zhang and **X. Gong***
Self-powered electronics by integration of flexible solid-state graphene-based supercapacitors with high performance perovskite solar cells
Adv. Func. Mater., 2015, 25, 2420-2427.

142 C. Yi, A. Wilhite, P. C. Du, H. C. Liu, R. D. Hu, Y. W. Chen, J. **Zheng, X. Gong***
High performance organic thermoelectric materials with tunable film morphology
ACS Appl. Mater. Inter., 2015, 7, 8984-8989.

141 W. Z. Xu, X. W. Hu, F. Huang, **X. Gong***, Y. Cao
Efficient inverted polymer solar cells by bi–electron-extraction layer
J. Photovoltaics, 2015, 5, 912-916.

140 K. Wang, C. Yi, C. Liu, C. H. Hsu, S. Chuang and **X. Gong***
Effects of Magnetic Nanoparticles and External Magnetostatic Field on the Bulk Heterojunction Polymer Solar Cells
Scientific Reports, 2015, 5, 9265.

139 M. Z. Zhang, R. D. Hu, H. Chen, Y. Chang, X**. Gong**, F. F. Liu and J. Zhen

Interfacial interaction and lateral association of cross-seeding assemblies between hIAPPand rIAPP oligomers
Phys. Chem. Chem. Phys., 2015, 17, 10373-10382.

138 K. Wang, C. Liu, P. C. Du, J. Zheng and **X. Gong***
Bulk Heterojuntion Perovskite Hybrid Solar Cells with Large Fill-Factor
Ener. Envir. Sci., 2015, 8(4), 1245-1255.

137 K. Wang, C. Liu, X. W. Hu, P. C. Du, L. Chen, C. Yia, J. H. Zhu, J. Zheng, A. Karim, **X. Gong***
Efficiencies of Perovskite Hybrid Solar Cells Influenced by Film Thickness and Morphology of $CH_3NH_3PbI_{3-x}Cl_x$ Layer
Organic Electronics, 2015, 21, 19-26.

136 C Liu, C. Yi, Y. L. Yang, K. Wang, S. Xiao and **X. Gong***
A Novel Donor-Acceptor Conjugated Polymer for Single-Junction Polymer Solar Cell with 10% Power Conversion Efficiency
ACS Appl. Mater., Inter., 2015**,** 7(8), 4928-4935.

135 C. Liu, K. Wang, P. C. Du, T. Y. Meng X. F. Yu, S. Z. D. Cheng and **X. Gong***
High Performance Planar Heteojunction Perovskite Solar Cells with Fullerene Derivatives as the Electron Transport Layer
ACS Appl. Mater. Inter., 2015, 7**,** 1153-1159.

134 C. Yi, X. W. Hu, H. C. Liu, R. D. Hu, C. H. Hsu, J. Zheng and **X. Gong***
Efficient Polymer Solar Cells Fabricated from Solvent Processing Additive Solution
J. Mater. Chem. C., 2015, 3, 26-32.

2014

133 C. Liu, W. Z. Xu, X. Guan, H. L. Yip, **X. Gong, F.** Huang, Y. Cao
Synthesis of Anthracene-Based Donor-Acceptor Copolymers with a Thermally Removable Group for Polymer Solar Cells
Macromolecules, 2014, 47(24), 8585-8593.

132 C. Liu, X. W. Hu, C. M. Zhong, M. J. Huang, K. Wang, Y. Cao, **X. Gong**,* A. J. Heeger,
Influence of Binary Processing Additives on the Performance of Polymer Solar Cells
Nanoscale, 2014, 6, 14297-14304.

131 X. W. Hu, K. Wang, C. Liu, T. Y. Meng, Y. Dong,F. Huang, **X. Gong**,* Y. Cao
High-Detectivity Inverted Near-Infrared Polymer Photodetectors using Cross-Linkable Conjugated Polyfluorene as an Electron Extraction Layer,
J. Mater. Chem. C. 2014, 2, 9592-9598.

130 X. W. Hu, C. Yi, M. Wang, C. H. Hsu, S. J. Liu, K. Zhang, C. M. Zhong, F. Huang, **X. Gong*** and Y. Cao
High-Performance Inverted Organic Photovoltaics with Over 1-μm Thick Active Layers
Adv. Eng. Mater., 2014, DOI: 10.1002/aenm.201400378.

129 C. Yi, K. Yue, H. Ren, W. B. Zhang, L. Huang, X. Lu, J. Zheng, G. R. Newkome, S. Z. D. Cheng and **X. Gong***

Water/Alcohol Soluble Neutral Fullerene Derivative to Reengineer the Surface of the Electron Extraction Layer for High Efficiency Inverted Polymer Solar Cells
ACS Appl. Mater. Inter., 2014, 6, 14189-14195.

128 K. Wang, H. Ren, C. Yi, Y. Sun, A. Karim and **X. Gong***
Enhanced efficiency and stability of polymer solar cells by PEDOT: PSS doped with Fe_3O_4 magnetic nanoparticles as an anode buffer layer
ACS Appl. Mater. Inter., 2014, 6, 13201-13208.

127 R. D. Hu, M. Z. Zhang, K. Patel, Q. M. Wang, Y. Chang, X. **Gong, G.** Zhang, J. Zheng
Cross-Sequence Interactions between Human and Rat Islet Amyloid Polypeptides
Langmuir, 2014, 30, 5193-5201.

126 P. Pitliya, Y. Sun; J. C. Garza; C. Liu, **X. Gong**, A. Karim, D. Raghavan
Synthesis and characterization of novel fulleropyrrolidine in P3HT blended bulk heterojunction Solar Cells
Polymer, 2014, 55, 1769.

125 X. Liu, Q. D. Li, Y. C. Li, **X. Gong**, S. J. Su, Y. Cao
Indacenodithiophene core-based small molecules with tunable side chains for solution-processed bulk heterojunction solar cells
J. Mater. Chem. A, 2014, 2, 4004-4013.

124 C. Yi, R. Hu, H. Ren, X. W. Hu, S. Wang, **X. Gong*** and Y. Cao
Protonation process of conjugated polyelectrolytes on enhanced power conversion efficiency in the inverted polymer solar cells
J. Photonics for Energy, 2014, 4, 04309901-04309908.

123 B. H. Li, H. Ren, H. Y. Yuan, A. Karim and **X. Gong***
Room-Temperature Solution-Processed MoO_x Thin Film as a Hole Extraction Layer to Substitute PEDOT:PSS in Polymer Solar Cells,
ACS Photonics, 2014, 1, 87-90.

122 M. Liu, Y. M. Liang, P. H. Chen, D. C. Chen, K. K. Liu, Y. C. Li, S. J. Liu, **X. Gong**, F. Huang, S. J. Su, Y. Cao
Three pyrido[2,3,4,5-lmn] phenanthridine derivatives and their large band gap copolymers for organic solar cells
J. Mater. Chem. A., 2014, 2(2), 321-325.

121 R. Zhou, Q. D. Li, X.C. Liu, X. H. Zhu, J. B. Peng, Y. Cao, **X. Gong***
Asolution-processable diketopyrrolopyrrole dye molecule with (fluoronaphthyl)thienyl endroups for organic solar cells
Dyes and Pigments, 2014, 101, 51-57.

2013

120 C. Liu, K. Wang, X. W. Hu, W. Zhang, Y. L. Yang, S. Xiao, **X. Gong***and Y. Cao
Molecular weight effect on the efficiency of polymer solar cells
ACS Appl. Mater. Inter., 2013, 5, 12163-12167.

119 X. L. Liu, J. J. Zhou, J. Zheng, M. L. Becker, and **X. Gong***
Water-solubleCdTe quantum dots as an anode interlayer for solution-processed near infrared polymer photodetectors

Nanoscale, 2013, 5, 12474-12479.

118 **X. Gong***
Towards High Performance Inverted Polymer Solar Cells through Interfacial Reengineering
SPIE, 2013, 8830, 88300G1-88300G16.

117 K. Wang, H. Ren, H. X. Wang, C. Yi, L. Huang, H. L. Zhang, A. Karim and **X. Gong***
Solution-Processed Fe_3O_4 Magnetic Nanoparticle Thin Film Aligned by an External Magnetostatic Field as a Hole Extraction Layer for Polymer Solar Cells
ACS Appl. Mater. Inter., 2013, 5, 10325-10330.

116 C. Zhao, X. Li, L. Li, **X. Gong**, Y. Chang, and J. Zheng
Mimicking the binding and unbinding of Fe^{3+} with transferrin using a single biomimetic Nanochannel
Chem. Comm., 2013, 49: 9317-9319.

115 Y. Dong, X. W. Hu, C. H. Duan, P. Liu, S. J. Liu, L. Y. Lan, D. C. Chen, L. Ying, S. J. Su**, X. Gong**, F. Huang, and Y. Cao
A Series of New Medium Band Gap Conjugated Polymers Based on Naphtho[1,2-c:5,6-c]bis(2-octyl-[1,2,3]triazole) for High Performance Polymer Solar Cells
Adv. Mater., 2013, 25, 3638-3688.

114 C. Zhao, X. S. Li, J. Wu, S. F. Chen, Q. M. Wang, **X. Gong**, L. Y. Li, and J. Zheng
Probing structure-antifouling activity relationships of polyacrylamides and polyacrylates.
Biomaterials, 2013, 34(20), 4714-4724.

113 X. W. Hu, D. Yang , F. Huang, **X. Gong**,* and Y. Cao
Solution-processed high-detectivity near-infrared polymer photodetectors fabricated by a novel low-bandgap semiconducting polymer
J. Phys. Chem. C., 2013, 117(13), 6537-6543.

112 Y. Hua, X. W. Hu, Z. X. Jiang, D. C. Chen, X. Liu, H Nie, S. J. Su, **X. Gong**, and Y. Cao
Pyridinium salt-based molecules as cathode interlayers for enhanced performance in polymer solar cells
J. Mater. Chem. A, 2013, 1(10), 3387-3394.

111 H. X. Wang, X. F. Yu, C. Yi, H. Ren, C. Liu, Y. Yang, S. Xiao, A. Karim, S. D. Cheng, and **X. Gong***
Fine-tuning of fluorinated thieno [3, 4-b] thiophene copolymer for efficient polymer solar cells
J. Phys. Chem. C. 2013, 117(9), 4358-4363.

110 C. Yi, **X. Gong***
Towards high performance inverted polymer solar cells
Current Opinion in Chemical Engineering, 2013, 2, 125.

109 X. W. Hu, M. Wang, F. Huang, **X. Gong**,* and Y. Cao
23% enhanced efficiency of polymer solar cells processed with 1-chloronaphthaleneas the solvent additive

Synthetic Metals, 2013, 164, 1.

108 H. Ye, X. W. Hu, Z. X. Jiang, D. C. Chen, X. Liu, Xin; H. Nie, S. J. Su, **X. Gong**, and Y. Cao
Pyridinium salt-based molecules as cathode interlayers for enhanced performance in polymer solar cells
J Mate. Chem. A, 2013, 1(10), 3387.

107 C. Zhao, X. S. Li, L. Y. Li, G. Cheng, **X. Gong**, and J. Zheng
Dual functionality of antimicrobial and antifouling of poly(N-hydroxyethylacrylamide)/salicylate hydrogels
Langmuir, 2013, 29(5), 1517.

2012

106 B. Zhang, X. W. Hu, M. Q. Wang, H. P. Xiao, **X. Gong**, W. Yang, and Y. Cao.
Highly efficient polymer solar cells based on poly(carbazole-alt-thiophene-benzofurazan)
New. J. Chem., 2012, 36, 2042.

105 X. L. Liu, T. B. Yang, H. X. Wang, W. Zhang, I. F. Hsieh, S. D. Cheng, and **X. Gong***
Solution-processed Near-infrared Polymer Photodetectors with an Inverted Device Structure
Organic Electronics, 2012, 13, 2929.

104 C. L. Wang, W. B, Zhang, H. J. Sun, C. C. Tsai, B. Lotz, **X. Gong**,* and S. Z. D. Cheng
A supramolecular "double-cable" structure with a 12944 helix in a columnar porphyrin-C60 dyad and the implication in polymer solar cells
Adv. Eng. Mater., 2012, 2, 1375.

103 **X. Gong**
Towards high performance inverted polymer solar cells
Polymer (Feature Articles), 2012, 53, 5437.

102 X. L. Liu, H. X. Wang, T. B. Yang, T. Z. Yu and **X. Gong***
Solution-processed ultrasensitive polymer photodetector with high external quantum efficiency and low dark current
Appl. Mater. Inter., 2012, 4, 3701.

101 T. B. Yang, M. Wang, C. H. Duan, X. W. Hu, L. Huang, J. P. Peng, F. Huang, **X. Gong***
Inverted polymer solar cells with 8.4% efficiency by conjugated polyelectrolyte
Ener. Envir. Sci., 2012, 5, 8208.

100 T. B. Yang, K. Sun, X. L. Liu, W. Wei, T. Z. Yu, **X. Gong**,* D. L. Wang, and Y. Cao
Zinc oxide nanowire as an electron-extraction layer for broadband polymer photodetectors with an inverted device structure
J. Phys. Chem. C., 2012, 116, 13650.

99 T. B. Yang, D. G Qin, L. F. Lan, W. B. Huang, **X. Gong**,* J. B. Peng and Y. Cao
Inverted structure polymer solar cells with solution processed zinc oxide thin film as an Electron collection Layer

Science China (Chemistry), 2012, 55, 755.

98 T. B. Yang, M. Wang, Y. Cao, F. Huang, L. Huang, J. B. Peng, **X. Gong**,* S. Z. D. Cheng and Y. Cao
Polymer solar cells with a low temperature-annealed sol-gel-derived MoO_x film as an hole extraction layer
Adv. Ene. Mat., 2012, 2, 523.

97 W. B. Zhang, Y. F. Tu, H. J. Sun, K. Yue, **X. Gong**,* and S. Z. D. Cheng
Polymer solar cells with an inverted device configuration using polyhedral oligomeric silsesquioxane-[60] fullerene dyad as a novel electron acceptor
Science China (Chemistry), 2012, 55, 749.

96 H. L. Dong, H. F. Zhu, Q. Meng, **X. Gong**, and W. P. Hu
Organic photoresponse materials and device
Chem. Soc. Rev., 2012, 41, 1754.

95 **X. Gong**,* T. Z. Yu, Y. Cao, and A. J. Heeger
Large open-circuit voltage polymer solar cells by poly (3-hexylthiophene) with multi-adducts fullerenes
Science China, 2012, 55, 743.

94 C. L. Wang, W. B. Zhang, R. Van Horn, Y. F. Tu, **X. Gong**,* S. Z. D. Cheng, Y. M. Sun, M. H. Tong, J. H. Seo, B. B. Y. Hsu, and A. J. Heeger
A porphyrin-fullerene dyad with a supramolecular "double-cable" structure as a novel electron acceptor for bulk heterojunction polymer solar cells
Adv. Mater., 2011, 23(26), 2951.

2011

93 M. Wang, X. W. Hu, P. Liu, W. Li, **X. Gong**, F. Huang, and Y. Cao
Donor-acceptor conjugated polymer based on naphtho[1,2-c:5,6-c]bis[1,2,5]thiadiazole for high-performance polymer solar cells
JACS, 2011, 133(25), 9638.

92 **X. Gong**, M. H. Tong, F. G. Brunetti, J. H. Seo, Y. M. Sun, D. Moses, F. Wudl, and A. J. Heeger
Bulk heterojunction solar cells with large open-circuit voltage and electron transfer with small donor-acceptor energy offset
Adv. Mater. 2011, 23(20), 2272.

91 Y. M. Sun, C. J. Takacs, S. R. Cowan, J. H. Seo, **X. Gong**, A. Roy, and A. J. Heeger
Efficient, air-stable bulk heterojunction polymer solar cells using MoOx as the anode interfacial layer
Adv. Mater., 2011, 23(19), 2226.

90 Y. M. Sun, M. F. Wang, **X. Gong**, J. H. Seo, B. B. Y. Hsu, F. Wudl, and A. J. Heeger
Polymer bulk heterojunction solar cells: function and utility of inserting a hole transport and electron blocking layer into the device structure
J. Mater., Chem., 2011, 21, 1365.

89 C. L. Song, C. B. Ma, F. Yang, W. J. Zeng, H. L. Zhang, and **X. Gong**
Synthesis of tetrachloro-azapentacene as an ambipolar organic semiconductor with high and balanced carrier mobilities

Organic Letters, 2011, 13(11), 2880.

88 W. Z. Cai, M. Wang, E. G. Wang, T. B. Yang, J. S. Moon, X. Gong,* and Y. Cao
Solvent effect leading to high performance of bulk heterojunction polymer solar cells by novel polysilafluorene derivatives
J. Phys. Chem., 2011, 115(5), 2314.

2010 (prior The University of Akron)

87 Y. M. Sun, **X. Gong**, B. H., H. L. Yip, A. K.-Y. Jen and A. J. Heeger
Solution processed crosslinkable hole selective layer for polymer solar cells in the inverted structure
Appl. Phys. Lett., 2010, 97(19), 193310/1-193310/3.

86 Y. M. Sun, M. F. Wang, **X. Gong**, J. H. Seo, B. B. Y. Hsu, F. Wudl and A. J. Heeger
Polymer bulk heterojunction solar cells: function and utility of inserting a hole transport and electron blocking layer into the device structure
J. Mater. Chem., 2010, 132(46), 16349-16351.

85 F. Xia, R. J. White, X. L. Zuo, A. Patterson, Y. Xiao, D. Kang, **X. Gong**, K. W. Plaxco, and A. J. Heeger
An electrochemical super sandwich assay for sensitive and selective DNA detection in complex matrices
JACS, 2010, 132, 14346.

84 Y. Y. Liu, C. L. Song, W. J. Zeng, K. G. Zhou, Z. F. Shi, C. B. Ma, Q. Han, H. L. Zhang, and **X. Gong**
High and balanced hole and electron mobilities from ambipolar thin film transistors by nitrogen containing oligoacences.
JACS, 2010, 132(46), 16349.

83 T. B. Yang, W. Z. Cai, D. H. Qin, E. G. Wang, L. F. Lan, Linfeng; **X. Gong**,* J. B. Peng, and Y. Cao,
Solution-processed zinc oxide thin film as a buffer layer for polymer solar cells with and inverted device structure
J. Phys. Chem. C, 2010, 114(14), 6849-6853.

82 F. Xia, X. L. Zuo, R. Q. Yang, Y. Xiao, D. Kang, A. Valle, **X. Gong**, A. J. Heeger, and K.W. Plaxco
On the binding of cationic, water-soluble conjugated polymers to DNA: electrostatic and hydrophobic interactions
JACS, 2010, 132(4), 1252-1254.

81 W. Zhao, W. Z. Cai, R. Xi. Xu, W. Yang, **X. Gong**, H. B. Wu, and Y. Cao
Novel conjugated alternating copolymer based on 2,7-carbazole and 2,1,3-benzoselenadiazole,
Polymer, 2010, 51(14), 3196-3202.

80 **X. Gong**,* M. H. Tong, S. H. Park, M. Liu, A. Jen, and A. J. Heeger
Semiconducting polymer photodetectors with electron and hole blocking layers: high detectivity in the near-infrared
Sensors, 2010, 10, 6488-6496.

79 F. Xia, X. L. Zuo, R. Q. Yang, R. J. White, Y. Xiao, D. Kang, **X. Gong**, A. A. Lubin,

A. Vallee-Belisle, J. D. Jonathan, BYB, Hsu, and K.W. Paxco
Label-free, dual-analyte electrochemical biosensors: a new class of molecular-electronic logic gates
JACS, 2010, 132(25), 8557.

78 F. Xia, X. L. Zuo, R. Q. Yang, R. J. White, Y. Xiao, D. Kang, **X. Gong**, A. A. Lubin, A. Jonathan, BYB, Hsu, A. J. Heeger, and K.W. Paxco
On the binding of cationic, water-soluble conjugated polymers to DNA: electrostatic and hydrophobic interactions
PNAS, 2010, 107(24), 10837.

77 C. H. Duan, W. Z. Cai, F. Huang, J. Zhang, M. Wang, T. B. Yang, C. M. Zhong, **X. Gong**, and Y. Cao,
Novel silafluorene-based conjugated polymers with pendant acceptor groups for high performance solar cells
Macro., 2010, 43(12), 5262.

76 F. Xia, X. L. Zuo, R. Q. Yang, R. J. White, Y. Xiao, D. Kang, **X. Gong**, A. A. Lubin, A. J. Heeger, and K.W. Paxco
On the binding of cationic, water-soluble conjugated polymers to DNA: electrostatic and hydrophobic interactions
JACS, **2010**, 132(13), 4971.

75 F. G. Brunetti, **X. Gong**, M. Tong, A. J. Heeger and F. Wudl
Strain and Hückel aromaticity driving forces for a promising new generation of electron acceptors in organic electronics
Angew. Chem., 2010, 49, 532.

74 W. Z. Cai, **X. Gong**,* Y. Cao
Polymer solar cells: recent development and possible routes for improvement of power conversion efficiency
Solar Energy Materials and Solar Cells, 2010, 94, 114.

2009

73 H. L. Dong, S. D. Jiang, L. Jiang, Y. L. Liu, W. P. Hu, S. K Yan and **X. Gong**
Thin film transistor by single crystalline nanowires semiconducting polymer
JACS, 2009, 131(47), 17315-17320.

72 **X. Gong**,* M. H. Tong; J. S. Moon, and A. J. Heeger
Ultrasensitive solution processed polymer photodetectors
SPIE, 2009, 74180I/1-74180I/14.

71 **X. Gong,*** M. H. Tong, Y. J. Xia, W. Z. Cai, J. S. Moon, Y. Cao, G. Yu, C. L. Shieh, B. Nilsson, and A. J. Heeger*
High-detectivity polymer photodetectors with spectral response from 300 nm to 1450 nm.
Science, 2009, 325, 1665.

70 **X. Gong**,* Y. L. Yang, and S. Xiao
Ambipolar charge transport in polymer light-emittingdiodes
J. Phys. Chem., C. **2009**, 113, 7398.

69 Y. Shao, **X. Gong**, A. J. Heeger, M. Liu, and A. K.-Y. Jen

Long-lifetime polymer light-emitting electrochemical cells fabricated with crosslinked hole-transport layers
Adv. Mater., 2009, 21, 1972.

2008-2006

68 **X. Gong**, H. Benmansour, Hadjar; G. C. Bazan, and A. J. Heeger
Red electrophosphorescence from a soluble binaphthol derivative as host and iridium complex as guest
J. Phys. Chem. B., 2006, 110(14), 7344.

67 **X. Gong**,* C. Soci, C.Y. Yang, and A. J. Heeger
Enhanced electron injection in polymer light-emitting diodes: polyhedral oligomeric silsesquioxanes as dilute additives
J. Phys. D-App. Phys. 2006, 39 (10), 2048.

66 J. Y. Kim, S. H. Kim, K. H. Lee, **X. Gong**, A. J. Heeger
New architecture for high-efficiency polymer photovoltaic cells using solution-basedtitanium oxide as an optical spacer
Adv. Mater., 2006, 18(5), 572.

2005

65 W. L. Ma, C. Y. Yang, **X. Gong**, and A. J. Heeger
Thermally stable, efficient polymer solar cells with nanoscale control of the interpenetrating network morphology
Adv. Func. Mater., 2005, 15(10), 1617.

64 **X. Gong**,* S. Wang, D. Moses, G. C. Bazan, and A. J. Heeger,
Multilayer polymer light-emitting diodes: white light emission with high efficiency
Adv. Mater., 2005, 17 (17), 2053.

63 W. L. Ma, P.K. Iyer, **X. Gong**,* G. C. Bazan, and A. J. Heeger
Water/methanol-soluble conjugated copolymer as an electron-transporting layer in polymer light-emitting diodes
Adv. Mater., 2005, 17 (3), 274.

2004

62 **X. Gong**,* W. L. Ma, J. C. Ostrowski, G. C. Bazan, D. Moses, and A. J. Heeger
White electrophosphorescence from semiconducting polymer blends
Polymer Materials Science and Engineering, 2004, 90, 660.

61 **X. Gong**,* D. Moses, and A. J. Heeger
White light electrophosphorescence from polyfluorene-based light-emitting diodes: utilization of fluorenone defects
J. Phys. Chem., 2004, 108, 8601.

60 **X. Gong**,* W. L. Ma, J. C. Ostrowski, G. C. Bazan, D. Moses, and A. J. Heeger
White electrophosphorescence from semiconducting polymer blends
Adv. Mater., 2004, 16, 615.

59 **X. Gong**,* W. L. Ma, J. C. Ostrowski, G. C. Bazan, D. Moses, A. J. Heeger and S.

Xiao
End-capping as a method for improving carrier injection in electrophosphorescent light-emitting diodes
Adv. Func. Mater., 2004, 14, 393.

58 **X. Gong**, D. Moses, and A. J. Heeger
Excitation energy transfer from polyfuorene to fluorenone defects
Synth. Met., 2004, 141, 17.

57 **X. Gong**, W. L. Ma, J. C. Ostrowski, G. C. Bazan, D. Moses, and A. J. Heeger
Conjugated polymer composites for use in electrophosphorescent light-emittingdiodes.
SPIE, 2004, 94, 5214.

56 **X. Gong**, S. H. Lim, J. C. Ostrowski, D. Moses, C. J. Bardeen, and G. C. Bazan
Phosphorescence from iridium complexes doped into polymer blends
J. Appl. Phys., 2004, 95, 948.

2003

55 **X. Gong**, J. C. Ostrowski, G. C. Bazan, D. Moses, A. J. Heeger, M. S. Liu, and A. K.-Y. Jen
Electrophosphorescence from a conjugated coploymer doped with an iridium complex: high brightness and improved operational stability
Adv. Mater., 2003, 15, 45.

54 S. Xiao, M. Nguyen, **X. Gong**, Y. Cao, H. B. Wu, D. Moses, and A. J. Heeger
Stabilization of semiconducting polymers with silsesquioxane
Adv. Func. Mater., 2003, 13, 25.

53 **X. Gong**, D. Moses, A. J. Heeger, S. Liu and A. K.-Y. Jen
High-performance polymer light-emitting diodes fabricated with a polymer hole injection Layer
Appl. Phys. Lett., 2003, 83, 18.

52 **X. Gong**, P. K. Iyer, D. Moses, G. C. Bazan, A. J. Heeger, and S. S. Xiao
Stabilized blue emission from polfluorene-based light-emitting diodes: elimination of fluorenone defects
Adv. Func. Mater., 2003, 13, 325.

51 X. Gong, J. C. Ostrowski, G. C. Bazan, D. Moses, and A. J. Heeger
Electrophosphorescence from a polymer guest-host system with an iridium complex as guest: Förster energy transfer and charge trapping
Adv. Func. Mater., 2003, 13, 439.

50 S. H. Lim, **X. Gong**, J. C. Ostrowski, G. C. Bazan, D. Moses, and C. J. Bardeen
Temperature dependence of electronic energy from a polymer host to a triplet emitter in light emitting diode materials
Chem. Phys. Lett., 2003, 376, 55.

49 **X. Gong**, J. C. Ostrowski, D. Moses, G. C. Bazan, and A. J. Heeger
High performance polymer based electrophosphorescent light-emitting diodes J.
Polymer Science, Part B, Polymer Physics, 2003, 41, 2691.

48 R. A. Negres, **X. Gong**, J. C. Ostrowski, G. C. Bazan, D. Moses, and A. J. Heeger,
Origin of efficient light emission from a phosphorescent polymer/organometallic guest-

host system.
Phys. Rev. B., 2003, 68, 115209.

2002

47 **X. Gong**,* P. K. Ng and W. K. Chan
Light-emitting devices based on ruthenium bipyridine complexes coupled with cadmium sulfide nanoparticles
J. Nanosc. & Nanotech., 2002, 2 (2), 151.

46 **X. Gong**, J. C. Ostrowski, G. C. Bazan, D. Moses, and A. J. Heeger.
Red electrophosphorescence from polymer doped with iridium complex
Appl. Phys. Lett., 2002, 11, 3711.

45 **X. Gong**, M. R. Robinson, J.C. Ostrowski, D. Moses, G. C. Bazan, and A. J. Heeger
High-efficiency polymer-based electrophosphorescent devices
Adv. Mater., 2002, 14, 581.

44 D. Wang, **X. Gong**, P. S. Heeger, F. Rininsland, G. C. Bazan, and A. J. Heeger.
Biosensors from conjugated polyelectrolyte complexes
PNAS, 2002, 99, 49.

2001-2000

43 P. K. Ng, **X. Gong**, S. H. Chan, et al.,
The role of ruthenium and rhenium diimine complexes in conjugated polymers that exhibit interesting opto-electronic properties
Chemistry-A European Journal, 2001, 7 (20), 4358.

42 **X. Gong**,* L. Liu, and W. J. Chen
Structures and fluorescence of nanocrystallines MSO_4:xSm_3+ (M=Ca, Sr, Ba; x=0.001-0.005).
Optical Materials, **2000**, 15(2), 143.

41 **X. Gong**,* L. Liu, and W. J. Chen
Preparation and photoluminescence of nanocrystallines MSO_4:xTb_3+ (M=Ca, Sr, Ba; x=0.001-0.005)
J. Appl. Phys., 2000, 88(7), 4389.

40 **X. Gong**,* L. Liu, and W. J. Chen
Effect of r-ray irradiation on crystal structures and luminescent properties of nanocrystallines MSO_4:xEu_3+ (M=Ca, Sr, Ba; x=0.001- 0.005)
J. Phys. Chem. Solids, 2000, 61, 115.

39 W. K. Chan, P. K. Ng, **X. Gong**, et al.
Light-emitting multifunctional rhenium (I) and ruthenium (II) 2, 2'-bipyridylc complexes with bipolar character
Appl. Phys. Lett., 2000, 75, 3920.

1999

38 W. K. Chan, P. K. Ng, **X. Gong**, et al.

Synthesis and electronic properties of conjugated polymers based on rhenium or ruthenium dipyridophenazine complexes
J. Mater. Chem., 1999, 9 (9), 2103.

37 W. Y. Ng, **X. Gong**, and W. K. Chan
Electronic and light-emitting properties of some polyimides based on bis(2,2 ': 6 ',2 ' terpyridine) ruthenium(II) complex
Chem. Mater., 1999, 11 (4), 1165.

36 S. J. Hou, **X. Gong**, and W. K. Chan.
Synthesis and characterization of polystyrene-block-polyisoprene functionalized with aromatic 1,3,4-oxadiazoles by metal catalyzed reaction
Macromol. Chem. Phys., 1999, 200, 100.

1998

35 **X. Gong**, P. Wu, W. Chen, and H. X. Yang,
Preparation and optical properties of nanocrystallines $RE_2Sn_{2-x}B'_xO_7$ (RE=Sm, Ce; B'= Fe, Co, Ni; x= 0.0 -1.0)
J. Mate. Res., 1998, 13 (2), 467.

34 **X. Gong**, W. Chen, et al.,
Photoluminescence and up-conversion optical properties of nanocrystallines CaS:Sm3+
Appl. Phys. Lett., 1998, 73, 2875.

33 **X. Gong**, P.K. Ng, and W.K. Chan.
Trifunctional light-emitting molecules based on rhenium and ruthenium bipyridine complexes
Adv. Mate, 1998, 16, 1337.

32 S. C. Yu, **X. Gong** and W. K. Chan.
Synthesis and characterization of polybenzobisoxazoles and polybenzobisthiazoles with 2,2'- bipyridyl units in the backbone
Macromoleculers, 1998, 31(17), 5639.

31 P. Wu, **X. Gong**, et al.,
Image storage based on biphotonic holograpy in azo materials
Appl. Phys. Lett., 1998, 72(4), 418.

30 P. Wu, **X. Gong**, et al.,
Transient biphotonic holographic gratings in azo materials
Phys. Rew. B, 1998, 57, 3874.

1997-1996

29 W. K. Chan, **X. Gong**, and W.Y. Ng
Photocurrent and charge mobility in PPV polymers
Appl. Phys. Lett., 1997, 71 (20), 1919.

28 W. K. Chan, **X. Gong**, and W.Y. Ng
Photoconductivity and charge transporting properties of metal-containingpoly(p-phenylenyinylene)s

Appl. Phys. Lett., 1997, 71, 2919.

27 P. K. Ng, **X. Gong**, and W.K. Chan.
Quinoxaline-based conjugated polymers containing ruthenium(II) bipgridine metal complex
Macromol Rapid Commu., 1997, 18,1007.

26 P. Wu, **X. Gong**, et al.,
Biphtonic self-diffraction in azo-doped polymer film
Appl. Phys. Lett., 1997, 70(10), 1224.

25 P. Wu, W. Chen, **X. Gong**, et al.,
Red-band holographic storage in azo dye sensitized by noncoherent light
Optics Letters, 1996, 21(6), 429.

1995-1986

There are another 24 publications with Chinese version.

BOOK CHAPTERS

8 C. Yi and **X. Gong** (invited)
Towards high performance inverted polymer solar cells
Progress in Polymer Engineering, edited by Thein Kyu, Elsevier, 2012

7 **X. Gong** (invited)
Polymer light-emitting diodes, Wiley-VCH,October 2012

6 **X. Gong** (invited)
Polymer Photovoltaic Cells, Chinese Science Press, 2015, November

5. **X. Gong** (invited), A. J. Heeger
Polymer White Light-emitting Diodes, Pan Stanford Publishing, 2008

4. **X. Gong** (invited), S. Wang
Polymer Light-Emitting Diodes: Devices and Materials, CRC published, 2008

3. **X. Gong**, D. Moses, A. J. Heeger
Polymer Based Light Emitting Diodes (PLEDs) and Displays Fabricated from Arrays of PLEDs in a book entitled “Electroluminescence-from Synthesis to Devices” edited by Klaus Műllen, Wiley-VCH Verlag, 2005.

2. **X. Gong** with other 20 co-authors
Modern Science and Technological English-Chinese Dictionary Tianjin University Press, Tianjin, P. R. China, 1568pp, 1996.

1. H. X. Yang and **X. Gong**
Inorganic Solid State Chemistry
Tianjin Science and Technological Press, Tianjin, P. R. China, 324pp, 1995.

GRANTED PATENTS

32 Solution-processed up to middle infrared transparent electrode for electronics
Xiong Gong, Tao Zhu, Luyao Zheng, USPTO 62/962,508

31 High Performance Perovskite Photovoltaics by Hybrid Perovskite Co-Crystalized with

Polymers
Xiong Gong, Kai Wang, Luyao Zheng, USPTO: 62/864,727

30. Flexible Self-Powered Electronics by Integration of Solar Cells with Supercapacitors
Xiong Gong, Tao Zhu and Yongrui Yang, USPTO: 62/907,884

29. Enhanced Thermoelectric Performance from Doped Perovskite Materials
Xiong Gong, Luyao Zheng, USPTO 62/966,070

28 PEDOT:PSS composite films having enhanced thermoelectric properties
Gong, Xiong; Yi, Chao, US 20170222113 A1 20170803.

27 Perovskite hybrid heterojunction solar cells with fullerene perovskite composite layer for improved performance
Gong, Xiong; Liu, Chang; Wang, Kai, US 20170125172 A1 20170504

26 Photodetector utilizing quantum dots and perovskite hybrids as light harvesters
Gong, Xiong; Liu, Chang, US 20170062139 A1 20170302

25 An organic polymer photo device with broadband response and increased photo-responsitivity
Gong, Xiong; Cheng, Stephen Z. D. US 20150318481 A1 20151105.

24 Polyhedral oligomeric silsesquioxane organic/polymeric dyads and its application for organic photovoltaic cells
Cheng, Stephen Z. D.; Zhang, Wenbin; **Gong, Xiong**, US 20140060650 A1 20140306.

23 P-type transition metal oxide-based films serving as hole transport layers in organic optoelectronic devices
Gong, Xiong; Yang, Tingbin, US 9252365 B2 20160202

22 Ultrasensitive solution-processed perovskite hybrid photodetectors
Gong, Xiong; Hu, Xiaowen; Du, Pengcheng, WO 2016014845 A1 20160128

21 Multilayer polymer light-emitting diodes for solid state lighting applications
Gong, Xiong; Heeger, Alan J.; Moses, Daniel; Bazan, Guilermo C.; Wang, Shu, WO 2006094101 A1 20060908.

20 White electrophosphorescence from semiconducting polymer blends
Gong, Xiong; Ma, Wanli; Ostrowski, Jacek; Bazan, Guillermo C.; Moses, Daniel; Heeger, Alan J, US 20050073245 A1 20050407

19 Metal-insulator-metal device and their methods of fabrication
Gong, Xiong; Yang, Kaixia; Gang, Yu; Boo, Nillson; Lee, Hsing Chung US 8222,077 B2

18 High Sensitivity Solution-processed Polymer Photodetectors with an Inverted Device Structure
Gong, Xiong, USPTO 61-614684

17 Infrared polymer photodetectors
Gong, Xiong, USPTO 61/702,785

16 Broadband polymer photodetectors using zinc oxides nanowire as an electron-transporting layer
Gong, Xiong, Yang, Tingbin, US 61/614,684

15 Solution-processed Perovskite Based Organic Inorganic Hybrid Photodetectors
Gong, Xiong, Wang, Kai, Liu, Chang, USPTO: 61/951,567

14 Enhanced electrical conductivity and thermoelectric performance of

poly(3,4-ethylenedioxythiophene):poly(styrene sulfonate) by binary secondary dopants
Gong, Xiong, Yi, Chao, USPTO: 62/110,642.

13 Ultrasensitive solution-processed perovskite hybrid photodetectors
Gong, Xiong; Wang, Kai; Liu, Chang, WO 2015187225 A2 20151210.

12 Metal-oxide thin film as a hole-extraction layer for heterojunction solar cells
Gong, Xiong; Li, Bohao; Ren, He, WO 205070013 A1 20150514.

11 Methods and devices comprising soluble conjugated polymers
Bazan, Guillermo C.; Liu, Bin; **Gong, Xiong**; Heeger, Alan J.; Ma, Wanli; Iyer, Parameswar, US 9017766 B2 20150428.

10 Electron donor-fullerene conjugated molecules for organic photovoltaic cells
Gong, Xiong; Cheng, Stephen Z. D.; Zhang, Wei, US 20140174536 A1 20140626.

9 An organic polymer photo device with broadband response and increased photo-responsitivity
Gong, Xiong; Cheng, Stephen Z. D., WO 2014089066 A1 20140612.

8 Broadband polymer photodetectors using zinc oxide nanowire as an electron-transporting layer
Gong, XiongUS 20130248822 A1 20130926.

7 Enhanced efficiency polymer solar cells using aligned magnetic nanoparticles
Gong, Xiong, US 20130247993 A1 20130926

6 Broadband polymer photodetectors using zinc oxide nanowire as an electron-transporting layer
Gong, Xiong, WO 2013142870 A1 20130926.

5 Enhanced efficiency polymer solar cells using aligned magnetic nanoparticles
Gong, Xiong, WO 2013142876 A1 20130926.

4 p-type transition metal oxide-based films serving as hole transport
Gong, Xiong; Yang, Tingbin, WO 2013063562 A1 20130502

3 Multilayer polymer light-emitting diodes for solid state lighting applications
Gong, Xiong; Heeger, Alan J.; Moses, Daniel; Bazan, Guillermo C.; Wang, Shu, US 8076842 B2 20111213.

2 Multilayer films for package applications and making film by a solution process
Gong, Xiong; Yu, Gang, US 20090278277 A1 20091112

1 Systems and methods for improving the qualities of polymer light-emitting electrochemical cells
Shao, Yan G.; Bazan, Guillermo C.; Heeger, Alan J.; **Gong, Xiong,** US 20080303432 A1 20081211.

INVITED PRESENTATIONS

161 "Stable, hysteresis-free and efficient perovskite solar cells", MRS Boston meeting, Dec. 4, 2019.

160 "High performance solution-processed perovskite solar cells through novel materials and device engineering", Department of Chemical Engineering, University of South Florida, Nov. 27, 2019.

159 “Perovskite solar cells and flexible self-powered electronics”, International Elastomer Conference, Cleveland, OH, Oct. 8, 2019.

158 “high-performance solution-processed perovskite solar cells through novel materials and device engineering”, Colorado School of Mines, Sept. 2019, Golden, CO.

157 “Solution-processed broadband photodetectors”, Air Force Research, Dayton, OH, June, 2019.

156 “Solution-processed perovskite solar cells”, Department of Chemical Engineering, University of Illinois at Chicago, April, 2019

155 "Printable Polymers for Flexible Electronics", Qingdao Technology University, Lanzhou, Oct. 31, 2018, China.

154 "Novel materials for high-performance perovskite solar cells", The 11th International Conference of Organic Electronics, Qingdao, Oct. 28, 2018, China.

153 "Printable Polymers for Flexible Electronics", Qingdao Technology University, Qingdao, Oct. 29, 2018, China.

152 “Perovskite solar cells via polymer linked perovskite materials”, 2018 Interface Conference of Synthetic Metals, Busan, South Korea, July 2, 2018.

151 “Solution-processed hybrid perovskite solar cells via novel materials and interfacial engineering”, Lanzhou University, June 26, 2018.

150 “Perovskite solar cells by novel perovskite materials”, 2nd International conference of Bioinspired Materials and Engineering, Beihang University, June 22, 2018.

149 “Solution-processed hybrid perovskite solar cells”, Department of Polymer Science and Engineering, College of Materials Science and Engineering, Lanzhou Jiaotong University, March 8, 2018.

148 “High-performance solution-processed hybrid perovskite solar cells via novel materials”, Institute of PhotoChemistry, Chinese Academy of Science, March 6, 2018.

147 “High-performance solution-processed hybrid perovskite solar cells via novel materials”, Department of Chemical Engineering and Materials Science, Michigan State University, January 11, 2018.

146 “Organic and organic-inorganic hybrid electronics”, Department of Chemical Engineering, Taiwan High Technology, Dec. 28, 2017.

145 “Solution-processed polymer and perovskite solar cells via novel materials”, Department of Chemical Engineering, National Jiaotong University, Dec. 27, 2017.

144 “Solution-processed organic-inorganic hybrid electronics via novel materials”, Department of Photonic Engineering, National Chengkung University, Dec. 26, 2017.

143 “Solution-processed perovskite solar cells via novel materials and device engineering”, Department of Chemistry, National Taiwan University, Dec. 23, 2017.

142 “High-performance solution-processed hybrid perovskite solar cells”, Charles Davidson School of Chemical Engineering, Purdue University, Oct. 17, 2017.

141 “Uncooled ultrasensitive solution-processed broadband photodetectors”, Department of Chemistry, Clemson University, Oct. 5, 2017.

140 “High-performance solution-processed hybrid perovskite solar cells”, College of Chemistry and Chemical Engineering, Lanzhou University, Aug. 23, 2017

139 “Magnetic effects on solution-processed solar cells” Chinese CAS Photochemistry Conference, Lanzhou, Aug. 24, 2017, China.

138 "Solution-processed perovskite solar cells via novel materials and device engineering", Lanzhou Chemical Physics Institute, CAS, Lanzhou, Aug. 25, 2017, China.

137 "Novel materials for solution-processed photovoltaics" 2nd Northwest Energy and Environmental Symposium, Lanzhou, Aug. 26, 2017, China.

136 "Magnetic effects on solution-processed solar cells" 2017 ChinaNano, Beijing, Aug. 30, 2017, China.

135 "Little science of plastics", Eastwood Elementary School, Hudson, OH, Jan. 27, 2017, USA.

134 "Printable flexible electronics", Dunhuang, Jan. 11, 2017, China.

133 "High-performance solution-processed perovskite photovoltaics", Department of Chemistry, University of Hong Kong, Hong Kong, Jan. 6, 2017, China.

132 "High-performance perovskite photovoltaics vis novel materials and device structure", International Conferences for Renewable Energy and Advanced Materials, Hong Kong, Jan. 5, 2017, China.

131 "High-performance perovskite photovoltaics vis novel materials and device structure", Hong Kong Baptist University, Hong Kong, Dec. 29, 2016, China.

130 "High-performance perovskite photovoltaics vis novel materials and device structure", Lanzhou University, Lanzhou, Dec. 27, 2016, China.

129 "Polymer solar cells vis novel materials and device structure", China University of Geosciences, Wuhan, Dec. 23, 2016, China.

128 "High-performance perovskite photovoltaics vis novel materials and device structure", Zhejiang University of Science and Technology, Hangzhou, Dec. 22, 2016, China.

127 "High-performance perovskite photovoltaics vis novel materials and device structure", Xian Jiaotong University, Xian, Dec. 21, 2016, China.

126 "Interfacial engineering for high-performance perovskite photovoltaics", Nankai University, Tianjin, Dec. 19, 2016, China.

125 "Solution-processed perovskite photovoltaics by novel materials", Tianjin University, Tianjin, Dec. 16, 2016, China.

124 "Solution-processed perovskite solar cells", Institute of Chemistry, CAS, Beijing, Dec. 15, 2016, China.

123 "Uncooled solution-processed broadband perovskite photodetectors", 2016 SPIE Annual Conference, San Diego, Sept. 1st, 2016, USA.

122 "Solution-processed broadband perovskite photodetectors", 252 ACS Annual Conference, Philly, Aug. 23rd, 2016, USA.

121 "Printable polymer flexible electronics" The University of Akron, July 9, 2016, Akron, USA

120 "Solution-processed perovskite photovoltaics via novel materials and device engineering", CAS University, July 4th, 2016m Beijing, China.

119 "Magnetic effects on solution-processed solar" 2016 Chinese Chemistry Society Conferences, July 3rd, 2016, Dalian, China.

118 "Printable polymer flexible electronics" Shangxi Normal University, July 1st, Xian, China.

117 "Solution-processed perovskite photovoltaics via novel materials and device engineering", International Conference of Synthetic Metals, Shangxi Normal University, July 1st, 2016, Xian, China.

116 "Printable polymer flexible electronics" Jianghan University, June 30, 2016, Wuhan, China

115 "Solution-processed perovskite photovoltaics via novel materials and device engineering", International Conference of Synthetic Metals, June 28, 2016, Guangzhou, China.

114 "Magnetic effects on solution-processed solar" 2nd International Symposium on the Science of Plastic Electronics, June 25, 2016, Beijing, China.

113 "Solution-processed perovskite photovoltaics via novel materials and device engineering", Institute of Chemistry, CAS, June 23, 2016, Beijing, China.

112 "Printable polymer flexible electronics" Symposium for REU Students, The University of Akron, June, 11, Akron, USA.

111 "Uncooled solution-processed broad bandgap photodetectors", College of Engineering, North Carolina State University, March 24, 2016, Raleigh, NC, USA.

110 "Solution-processed photovoltaics novel materials and device engineering", Department of Materials Science and Engineering, University of North Texas, Feb. 25, 2016, Houston, Denton, USA.

109 "Higher performance solution-processed solar cells through novel materials and device engineering", Department of Electric Engineering, University of Houston, Feb. 19, 2016, Houston, TX, USA.

108 "Higher performance solution-processed solar cells through novel materials and device engineering", Department of Materials Science and Engineering, Ohio State University, Jan. 26, 2016, Columbus, OH, USA.

107 "Uncooled ultrasensitive solution-processed broad-band photodetectors" Air Force Research Lab., Wright-Patterson, Jan. 25, 2016, Dayton, OH, USA.

106 "Printable flexible polymer electronics" Nanjing Normal University, Nanjing, Oct., 2015, P.R. China.

105 "High-performance polymer solar cells via novel materials and device engineering" Nanjing Normal University, Nanjing, Oct., 2015, P. R. China.

104 "Solution-processed perovskite hybrid solar cells?" Zhejiang University, Hangzhou, Oct., 2015, P. R. China.

103 "15 % efficiency from single junction polymer solar cells, POSSIBILITY?" 2015 China Polymer Conference, Suzhou, Oct., 2015, P. R. China.

102 "Magnetic effects on polymer solar cells", 10th International Chinese Organic Electronics, Aug. 7th to 10th, Beijing, P. R. China.

101 "Possibility to observe 15% efficiency form single junction polymer solar cells", Beijing University and Technology, Aug. 6th, Beijing, P. R. China.

100 "Solution-processed perovskite hybrid solar cells" Ningbo Institute of Materials Science, CAS, Ningbo, P. R. China, June 29, 2015.

99 "Magnetic effect on polymer solar cells" 13th International Conference of Polymer for Advanced Technology, Hangzhou, P. R. China, June 27, 2015.

98 "Approaching 15% Efficiency Polymer Solar Cells" Hangzhou University, P. R. China, Hangzhou, June 26, 2015.

97 "Perovskite hybrid solar cells" Northwest Normal University, Lanzhou, P. R. China, June 15, 2015.

96 "Perovskite hybrid solar cells" Northwest Normal University, Lanzhou, P. R. China, June 6 2015.

95 "Polymer electronics" Hexi University, Zhangye, P. R. China, June 18, 2015.

94 "Solution-processed high performance polymer solar cells" Northwest Normal University, Lanzhou, P. R. China, June 5, 2015.

93 "Printable flexible polymer electronics" Lanzhou University, Lanzhou, P. R. China, June 16, 2015.

92 "Polymer solar cells by novel materials" Lanzhou University, Lanzhou, P. R. China, June 2, 2015.

91 "Little Science of Plastics" Hudson Elementary School, Feb. 17, 2015, Hudson, OH, USA

90 "High efficiency of planar heterojunction perovskite solar cells by fine-tuningcrystallization morphology" MRS Fall Conferences, Nov. 30th, 2014, Boston, MA, USA.

89 "High performance solution-processed polymer solar cells via novel materials and interfacial engineering" The Akron Polymer Conferences, Akron, OH, Oct. 2-3, 2014.

88 "Towards 15% Efficiency Polymer Solar Cells" The First International Symposium on the Science of Plastic Electronics, Beijing, P. R. China, Sept. 25, 2014.

87 "Polymer electronics" Nanjing Chemical Company, Nanjing, P. R. China, Sept. 23, 2014

86 "High performance polymer solar cells via novel materials" Suzhou Nanoinstitute, CAS, Suzhou, P. R. China, Sept. 22, 2014.

85 "High performance polymer solar cells via interfacial engineering" Suzhou University, Suzhou, P. R. China, Sept. 22, 2014.

84 "Inverted polymer solar cells via novel materials" Nanjing University, Nanjing, P. R. China, Sept. 21, 2014.

83 "Printable Polymer Electronics", Datong University, Datong, P. R. China, Sept. 17, 2014.

82 "High performance solution-processed polymer solar cells" First Ohio Conference on the sustainable use of greenhouse gases, Columbus, OH, Aug. 18, 2014.

81 "Polymer solar cells with over 1 μm thickness active layer" Chinese Chemistry Annual Congress, Beijing, Aug. 5th, 2014.

80 "2D conjugated polymers for polymer solar cells with over 10% efficiency" Chinese Chemistry Annual Congress, Beijing, Aug. 4th, 2014.

79 "Over 10% efficiency from single junction polymer solar cells", 6th International symposium on polymer materials science, Akron, OH, July 28, 2014.

78 "High performance polymer solar cells via novel materials and interfacial engineering", Beihang University, Beijing, China, June 30, 2014.

77 "High performance polymer solar cells via novel materials and interfacial engineering", Chemistry Institute, CAS, Beijing, China, June 29, 2014.

76 "High performance polymer solar cells via device engineering", Nankai University, Tianjin, China, June 18, 2014.

75 "High performance polymer solar cells via novel materials", Tianjin University, Tianjin, China, June 17, 2014.

74 "Polymer electronics", Lanzhou City University, Lanzhou, China, June 10, 2014.

73 "Inorganic Chemist meets with Polymer Scientist", Northwest Normal University, Lanzhou, China, June 9, 2014.

72 "Interfacial engineering for high performance polymer solar cells", Lanzhou University, Lanzhou, China, June 12, 2014.

71 "Inverted infrared polymer photodetectors", Lanzhou Institute of Chemical Physics, CAS, Lanzhou, China, June 13, 2014.

70 "High performance single junction polymer solar cells by 2D conjugated polymers", International conference on polymer chemistry, Shanghai, P. R. China, June 4, 2014.

69 "Interfacial engineering for high performance inverted polymer solar cells", ACS Dallas Meeting, March 17, 2014 ", ACS Dallas Meeting, March 17, 2014

68 "High performance polymer solar cells through device design and novel materials", Tsinghua University, Nov. 20th, 2013, Beijing, China

67 "Polymer Solar Cells: Device and Materials", Norfolk State University, Sept. 27th, 2013, Norfolk, VA, USA.

66 "Novel "electron donor-fullerene" conjugated molecules for polymer solar cells with an inverted device structure", 246 ACS conference, Sept. 12, 2013, Indianapolis, IN, USA

65 "Towards high performance solar cells" South China University and Technology, June, 2013, Guangzhou, China.

64 "Polymer solar cells by novel conjugated fullerene molecules", Oka Ridge National Laboratory users' workshop, Aug. 12-15th, 2013, Oak Ridge, TN, USA

63 "Over 10 % efficiency polymer solar cells", University of Tennessee, Aug. 15th, 2013, Knoxville, TN, USA.

62 "Towards high performance inverted polymer solar cells through interfacial engineering", SPIE, Aug. 2013, San Diego, CA, USA.

61 "Hybrid infrared polymer photodetectors", Lanzhou University, Jul. 2013, Lanzhou, China

60 "Solution-processed high performance polymer solar cells: device structures and materials", Lanzhou Institute of Chemical Physics, CAS, Jul. 2013, Lanzhou, China

59 "Renewable energy", Invited by Government of Dunhuang City, Gansu Province, July 2013, Dunhuang, China

58 "How to approach high performance organic solar cells", National Science Foundation of China, Jul. 2013, Beijing, China

57 "Inverted infrared polymer photodetectors", International workshop on organic electronics, Jun. 2013, Beijing, China

56 "Science of Plastics", Evamere Elementary School, May, 2013, Hudson, OH, USA

55 "High performance inverted polymer solar cells", Department of Chemical Engineering, University of Akron, April 2013, Akron, OH, USA

54 "High performance inverted polymer solar cells", MRS Spring meeting, Apr. 2013, SFO, CA, USA

53 "Approaching high performance polymer solar cells by interfacial engineering and novel materials", 2nd symposium of organic photovoltaic, Kent State University, April 2013, Kent, OH, USA

52 "Towards high performance solar cells", APS March conference, Mar. 2013, Baltimore, Maryland, USA

51 "Solution-processed polymer electronics", Research for Lunch, Research office of University of Akron, Feb. 2013, Akron, OH, USA

50 "Towards high performance polymer photovoltaic cells", Lanzhou University, Dec. 2012, Lanzhou, China

49 "Inverted polymer solar cells", Northwest Normal University, Dec. 2012, Lanzhou, China

48 "Interface engineering for high performance polymer solar cells", Nov. 2012, MRS Fall meeting, Boston, MA

47 "High performance polymer solar cells by novel materials", University of California Santa Barbara, Oct. 30th, 2012, CA, USA

46 "High performance solution-processed polymer solar cells", University of Pittsburgh, Oct. 2012, PA, USA

45 "Solution-processed organic photovoltaic cells", Case Western Reserve University, Sept. 2012, Cleveland, OH, USA

44 "High performance inverted polymer solar cells", NSF and ONR workshop, Sept. 2012, DC, USA

43 "Inverted polymer solar cells", Institute of Chemistry, CAS, July 4, 2012, Beijing, China

42 "Towards high performance inverted polymer solar cells", IUPAC Polymer Congress, June 2012, USA

41 "Polymer solar cells" June 2012, Polymer Conferences, Akron, OH

40 "Flexible electronics", Plastic Society of Akron and Cleveland, Apr. 2012, Akron, OH

39 "Organic electronics", Akron Polymer Society, Nov. 2011, Akron, OH, USA

38 "Polymer solar cells with an inverted device structure", MRS meeting, Nov. 2011, Boston, USA

37 "Polymer solar cells with an inverted device structure", International Chinese Organic Electronics, Oct. 2011, Zhang Jiajie, China

36 "Solution-processed polymer photodetectors", Akron Advanced Materials, Sept. 2011, Akron, OH, USA

35 "Solution processed infrared polymer photodetector", SPIE conference, Aug. 2011, San Diego, CA, USA

34 "Ultrasensitive polymer photodetectors", South China University of Science and Technology, Jun. 2011, Guangzhou, China

33 "Printable polymer electronics", Lanzhou University, Jun. 2011, Lanzhou, China

32 "Polymer solar cells by novel electron acceptor", Polymer Congress, May, 2011, Beijing, China

31 "Infrared polymer photodetector", Peking University, May. 2011, Beijing, China

30 "Polymer solar cells with an inverted device structure", Beijing University Chemical Technology, May 2011, Beijing, China
29 "Solution-processed Organic Electronics", Dec. 2010, Cleveland, OH, USA
28 "Infrared polymer photodetector", SPIE conference, Aug. 2010, San Diego, CA, USA
27 "Solution-processed organic photodetectors", Xi An 3rd International Organic Electronics, June 2010, Xian, China
26 "Polymer solar cells", Northwest Normal University, June 2010, Lanzhou, China
25 "Solution-processed organic photodetectors", Lanzhou University, Jun. 2010, Lanzhou, China
24 "Solution-processed organic photodetectors", South China University of Science and Technology, June 2010, Guanzhou, China
23 "Polymer photodetector", MRS Spring Meeting, SFO, April 2010, CA, USA
22 "Polymer solar cells with larger open-circuit voltage", MRS Spring Meeting, SFO, April 2010, CA, USA
21 "Ultrasensitive polymer photodetectors", UCSB Organic Electronics Workshop, Sept. 2009, Santa Barbara, CA, USA
20 "Polymer photodetector", SPIE, Aug. 2009, San Diego, CA, USA
19 "Solution-processed ultrasensitive polymer photodetectors", PS, Mar. 2009, Pittsburgh, PA, USA
18 "Polymer photodetectors", US-Japan Polymat, Aug. 2008, Ventura, CA, USA
17 "Semiconducting polymers and its applications", Lanzhou City University, Oct. 2007, Lanzhou, China
16 "Organic/polymer optoelectronic devices", Lanzhou University, Sept. 2007, Lanzhou, China
15 "Polymer electronic and optoelectronic devices", Northwest Normal University, Sept. 2007, Lanzhou, China
14 "Polymer solar cells", South China University of Science and Technology, June 2007, Guangzhou, China
13 "Fluorenone defects in polyfluorens", Workshop on Organic/Polymer Devices, May, 2007, Montreal, Canada
12 "Materials and devices of PLEDs and polymer Solar Cells", Peking University, Sept. 2006, Beijing, China
11 "Semiconducting polymers and polymer optoelectronic devices", Lanzhou Jiaoton University, Sept. 2006, Lanzhou, China
10 "Single- and multilayer white PLEDs for solid state lighting application", Department of Electrical and Computer Engineering, University of California, San Diego, Aug. 2006, San Diego, CA, USA
9 "Plastic electronics", Institute of Chemistry, Chinese Academy of Science, Aug. 2006, Beijing, China
8 "Recently progress on PLEDs and solar cells at UCSB", International Conference on Organic/Polymer Devices, Jul. 2006, Changchun, China
7 "Multilayer white PLEDs", SPIE Conference, 2006, San Diego, CA, USA
6 "White PLEDs", SPIE Conference, 2005, Denver, CO, USA

5 "Polymer electrophosphorescent LEDs", SPIE Conference, Aug. 2004, San Diego, CA, USA

4 "White light PLEDs", ICSM, 2004, Australia

3 "Stabilized blue emission from PLEDs made by polyfluorenes", APS meeting, Mar. 2003, Austin, TX, USA

2. "Single layer white PLEDs", ACS Conference, 2003, Anaheim, CA, USA

1 "Polymer electrophosphorescent LEDs", MRS Spring Meeting, April 2002, San Francisco, CA, USA

TEACHING AND MENTORING EXPERIENCE

1. 2010-present, Department of Polymer Engineering, University of Akron

1. Mentoring/Supervising:
   - 1 research associate, 5 Ph. D. students and 6 M.Sc. students, 2 undergraduate students, 2 high-school students, 1 high school teacher currently in my research group,
   - 9 Ph. D. and 20 M Sc students graduated in 2012, 2013, 2014, 2015, 2016 and 2017
2. Teaching
   1. Electronic properties of materials, graduate students, evaluation rate: 4.75/5 (2018)
   2. Independent research, 3+2 AMP graduate students, evaluation rate: 4.86/5 (2017).
   3. Semiconducting Polymers, graduate course, evaluation ratings: 4.67/5 (2011); 4.80/5 (2012); 4.80/5 (2014), 4.80/5 (2016),
   4. Flexible Electronics, graduate course, evaluation ratings: 4.92/5 (2011), 4.90/5(2013), 4.88/5 (2015), 4.86/5 (2017).
   5. Electronic properties of materials, graduate course, evaluation ratings: 4.76/5 (2013), 4.85/5(2014), 4.88/5 (2016).
   6. Polymer Science for Engineers, undergraduate course, evaluation rating: 4.38/5(2012).

   My teaching evaluation ratings were ranked top one in the last 8 years.

2. 2001-2010 Center for Polymers and Organic Solids, UC Santa Barbara, CA
   - Assisted Prof. Alan J. Heeger to supervise/train Ph. D. candidates and post-doctoral fellows on organic and polymer electronic and optoelectronic devices
   - Supervise/train undergraduate students on semiconducting polymers
   - Supervise/train high school students on semiconducting polymers

SERVICES

1. Committees at UA
   - Graduate Program Review
   - Admissions
   - Faculty Search (5 times)
   - University Library
   - Dean Search
   - University Research, etc.
2. Review Panels

1) Air Force
2) NSF
3) Canada
4) Swiss NSF
5) Hong Kong
6) China NSF
7) Iowa State
8) AAAS

3. Conference Organizer
    1) 2014 ACS Dallas
    2) 2015 PPS Cleveland
    3) 2016 ACS Philadelphia
    4) 2016 ICSM Guangzhou
    5) 2015 and 2016 First and Second Flexible Electronics: Science and Engineering

REGULAR REVIEWER (25 journals)

Science	Nature Photonics	Nature Comm.
Chem. Rev.	J. Am. Chem. Soc.	Ange. Chem. Inter. Edi.
Adv. Mater.	Adv. Func. Mater.	Adv. Eng. Mater.
J. Phys. Chem.	Chem. Phys.	Polymer
J. Polymer Science	Appl. Phys. Lett.	J. Photovoltaic Cells
J. Phys. D. Appl. Phys.	Nano Sci.	Langmuir
Macromolecule	Macr. Rapid Comm.	Synth. Metal
Sol. Ener. Mate. and Sol. Cells	ACS Appl. Mate. & Inter.	Nano Scale

MEMBERSHIP OF ACADEMIC ASSOCIATIONS

1. Member of Materials Research Society (MRS)
2. Member of American Chemistry Society (ACS)
3. Member of Society of Displays (SID)