

Xiong Gong, Ph. D.

Professor of Polymer Science and Polymer Engineering and Chemical Engineering  
School of Polymer Science and Polymer Engineering, and Department of Chemical, Biomolecular and  
Corrosion Engineering, College of Engineering and Polymer Science, The University of Akron  
Tel: (330) 972-4983; Fax: (330) 972-3406

E-mail: [xgong@uakron.edu](mailto:xgong@uakron.edu), Homepage: <http://ohme.uakron.edu>

Google Scholar: <https://scholar.google.com/citations?user=XG6dLAAAAAJ&hl=en>

Associate Editor: Organic Electronics

Deputy Editor: Emergent Materials

Editorial Board Members: Scientific Reports, Polymers, and Chinese Chemistry Letter

## HIGHLIGHT ACCOMPLISHMENTS

- Scientific Contributions
  - Total of 241 articles published in peer-reviewed journals including in Science
  - Over 26,400 peer's citations, and with an H-index of 70 and i10-index of 173.
  - 32 granted patents (10 have listened) plus 5 pending patents
  - 8 book chapters
  - 166 invited talks in conferences and academic institutions
- Research Grants at The University of Akron (UA)
  - Funding: ~ \$7 M as a PI since 2011.
- Teaching at UA
  - Taught eight courses, among them, four were newly developed courses
  - Two courses for undergraduates in the Department of Mechanical Engineering and the Department of Chemical, Biomolecular and Corrosion Engineering at UA
  - Six courses for graduate students in the College (School) of Polymer Science and Polymer Engineering (C/SPSPE) at UA
  - Teaching evaluation rates ranked on the top five in the C/SPSPE at UA in the past 11 years

## AWARDS AND HONORS

- Top 2% of the World's Top Scientists (2021)
- Among the list of the World's 10,000 Top Scientists
- Outstanding Researcher Award, The University of Akron (2018)
- The World's Most Influential Scientific Minds (2015)
- Top 1% Highly Cited Researcher by Thomson Reuters (2014 - ongoing)
- NSF CAREER Award (2014)
- Alexander von Humboldt Fellowship (Germany)
- 3M Non-tenured Faculty Award
- K. C. Wong Education Foundation Fellow (Hong Kong)
- The University of Akron, Summer Research Award

## RESEARCH INTERESTS AND EXPERTISE

- Conjugated polymer chemistry and physics, and their applications in electronics

- Novel organic and organic-inorganic hybrid materials
- Room-temperature operated solution-processed broadband photodetectors
- Perovskite materials for energy generation and storage
- Organic/polymer electronics and optoelectronics for energy generation and storage
- Polymer-based biosensors and biochips
- Organic/perovskite thermoelectric materials and devices
- Graphene and 2D materials based flexible supercapacitors
- Self-powered flexible electronics
- Solution-processed transparent polymeric thin-film electrodes for flexible electronics
- Roll-to-roll manufacturing and advanced manufacturing, Nano printing
- Chemistry and physics of inorganic quantum dots and nanoparticles
- Ultrafast spectroscopy

## EMPLOYMENT

- December 2021 – present, Full Professor, Department of Chemical, Biomolecular and Corrosion Engineering, The University of Akron, Akron, OH
- May 2017 – present, Full Professor, Department of Polymer Engineering, C/SPSPE, Akron, OH
- May 2015 – May 2017, Associate Professor, Department of Polymer Engineering, CPSPE, Akron,
- August 2010 – May 2015 Assistant Professor, Department of Polymer Engineering, CPSPE,
- January 2004 - August 2010 Senior Research Scientist, Center for Polymers and Organic Solids (CPOS), University of California, Santa Barbara (UCSB), CA
- January 2004 - August 2010 Manager and Senior Scientist, CBrite, Inc. (Formally named DSI)
- January 2003 – December 2003, Senior Scientist, Diode Solution, Inc.(DSI) Goleta, CA

## EDUCATION AND PROFESSIONAL TRAINING

- April 2001- December 2003 Post-doctoral Fellow, with Professor Alan J. Heeger (2000 Nobel Laureate in the CPOS at UCSB
- January 2002 – December 2004 Minor (graduate courses) in the Department of Electrical Engineering at UCSB
- 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  $\gamma$ -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 their medical applications  
Supervisor: Prof. Yuchen Pan

## TEACHING

- “Polymer Science for Engineers”, undergraduate course, Department of Mechanical Engineering at UA
- “Electrochemical Engineering”, undergraduate course, Department of Chemical, Biomolecular and Corrosion Engineering at UA
- “Fundamentals of Polymer Structure Characterization”, graduate core course, CPSPE at UA
- “Carbon-Polymer Nanotechnology” (developed by myself), graduate course, CPSPE at UA
- “Semiconducting Polymers” (developed by myself), graduate elective course, CPSPE at UA
- “Research Problems in Polymer Engineering”, graduate required course, CPSPE at UA
- “Flexible Electronics”(developed by myself), graduate elective course, CPSPE at UA
- “Optoelectronics Properties of Materials” (developed by myself), CPSPE at UA

Teaching evaluation rates ranked on the top five in the College (School) of Polymer Science and Polymer Engineering in the past 11 years

## PUBLICATIONS

### A: Journal Scientific Peer-Reviewed Publications

- 241 D. Z. Wu, L. Shen, D. Zhang, T. Zhu, J. Zheng, **X. Gong\***  
Effect of external magnetic field on bulk heterojunction polymer solar cells  
**Macromol. Rapid Commun.**, 2022, DOI: 10.1002/marc.202100933.
- 240 Y. R. Yang, T. Zhu, L. Shen, Y. H. Liu, D. Zhang, B. W. Zheng, K. Gong, J. Zheng, **X. Gong\***  
Recent progress in the all-solid-state flexible supercapacitors  
**SmartMat**, 2022, under revision.
- 239 Y. Cao, X. J. Xu, L. Shen, J. Zheng, **X. Gong\***  
Origins of the photocurrent multiplication effect in the polymer photodetectors based on poly(3-hexylthiophene incorporated with fullerenes derivatives  
**Macromol. Rapid Commun.**, 2022, accepted, under revision.
- 238 T. Zhu, L. N. Shen, S. Xun, J. S. Sarmiento, Y. R. Yang, H. Wang, J. L. Bredas, **X. Gong\***  
High-performance ternary perovskite-organic solar cells  
**Adv. Mater.**, 2022, DOI: 10.1002/adma.202109348.
- 237 L. N. Shen, T. Zhu, X. W. Zhang, K. Gong, H. Wang, **X. Gong\***  
Bulk heterojunction perovskite solar cells incorporated with p-type low optical gap conjugated Polymers  
**Nano Energy**, 2022, DOI: 10.1016/j.nanoen.2021.106907.
- 236 Y. J. Tang, D. Zhang, **X. Gong**, J. Zheng  
A mechanistic survey of Alzheimer’s disease  
**Biophysical Chemistry**, 2022, DOI:10.1016/j.bpc.2021.106735
- 235 B. S. Zhang, L. N. Shen, L. Y. Zheng, T. Zhu, R. Chen, L. Liu, J. Zheng, **X. Gong\***

- Solution-processed bulk heterojunction broadband photodetectors based on perovskites incorporated with PbSe quantum dots  
**Organic Electronics**, 2022, DOI: 10.1016/j.orgel.2021.106410.
234. Lening Sheng, Chao Yi, Luyao Zheng, Yanghe Liu, Jie Zheng, and **Xiong Gong\***  
Solution-processed broadband photodetectors without transparent conductive oxide electrodes  
**J. Mater. Chem. C**. 2021, DOI: 10.1039/D1TC04278E
233. D. Zhang, Y. L. Liu, Y. H. Liu, Y. P. Peng, Y. J. Tang, L. M. Xiong, **X. Gong**, J. Zheng\*  
A General crosslinker strategy to realize intrinsic frozen resistance of hydrogels  
**Advanced Materials**, 2021, DOI:10.1002/adma.202104006
232. C. Yi, L. N. Shen, J. Zheng, **X. Gong\***  
A negative piezo-conductive effect from doped semiconducting polymer thin films  
**Scientific Reports**, 2021, doi:10.1038/s41598-021-97812-4
231. L. N. Shen, Y. R. Yang, T. Zhu, L. Liu, J. Zheng, **X. Gong\***  
Efficient and stable perovskite solar cells by B-site compositional engineered all-inorganic perovskites and interface passivation  
**ACS Appl. Mater. & Interfaces**, 2021, am-2021-12250t (accepted)
230. R. Chen, L. N. Shen, L. Y. Zheng, T. Zhu, Y. H. Liu, L. Liu, J. Zheng, **X. Gong\***  
2D/3D perovskite bilayer thin films post-treated with solvent-vapor for high-performance perovskite photovoltaics  
**ACS Appl. Mater. & Interfaces**, 2021, DOI: 10.1021/acsami.1c15735
229. M. X. Yang, Y. H. Liu, X. Y. Luo, Y. Cao, **X. Gong,\*** and W. N. Xu\*  
Molecular engineering of polyaniline with ultrathin polydopamine and monolayer graphene for all-solid-state flexible micro-supercapacitors  
**ACS Appl. Ener. Mater.** 2021, DOI:10.1021/acsaem.1c01996
228. T. Zhu, L. N. Shen, H. L. Chen, Y. H. Liu, R. Chen, J. Zheng, J. P. Wang, **X. Gong\***  
Conjugated molecules based 2D perovskites for high-performance perovskite solar cells  
**J. Mater. Chem. A**. 2021, DOI:10.1039/d1ta05934c.
228. T. Zhu and **X. Gong\***  
Low-dimensional perovskite materials and their optoelectronics  
**InfoMat**, 2021, 3, 1039-1069.
226. Y. R. Yang, D. Zhang, Y. H. Liu, L. N. Shen, T. Zhu, J. X. Xu, J. Zheng, **X. Gong\***  
Solid-state double-network hydrogel redox electrolytes for high-performance flexible supercapacitors  
**ACS Applied Materials & Interfaces**, 2021, 13, 34168-34177.
225. Y. L. Liu, D. Zhang, Y. J. Tang, Y. X. Zhang, **X. Gong**, S. W. Xie, J. Zheng  
Machine learning-enabled repurposing and design of antifouling polymer brushes  
**Chemical Engineering Journal**, 2021, 420, 129872.
224. Y. J. Tang, Y. L. Liu, Y. X. Zhang, D. Zhang, **X. Gong**, J. Zheng  
Repurposing a cardiovascular disease drug of cloridarol as hIAPP inhibitor  
**ACS Chemical Neuroscience**, 2021, 12, 1419-1427.
223. Y. J. Tang, D. Zhang, Y. X. Zhang, Y. L. Liu, **X. Gong**, Y. Chang, B. P. Ren, J. Zheng  
Introduction and Fundamentals of Human Islet Amyloid Polypeptide Inhibitors  
**ACS Applied Bio Materials**, 2020, 3, 8286-8308.
222. D. Zhang, Y. J. Tang, Y. X. Zhang, F. Y. Yang, Y. L. Liu, X. Y. Wang, **X. Gong**, J. Zheng

- Highly stretchable, self-adhesive, biocompatible, conductive hydrogels as fully polymeric strain sensors  
**J. Mater. Chem. A.**, 2020, 8, 20474-20485.
- 221 L. Y. Zheng, T. Zhu, Y. F. Li, H. D. Wu, C. Yi, J. H. Zhu, **X. Gong\***  
Enhanced Thermoelectric Performance of the F4-TCNQ Doped FASnI<sub>3</sub> Thin Films  
**J. Mater. Chem. A**, 2020, 8, 25431 - 25442.
- 220 T. Zhu, Y. R. Yang, K. Gui, C. M. Liu, J. Zheng, **X. Gong\***  
Novel Quasi-2D Perovskites for Stable and Efficient Perovskite Solar Cells  
**ACS Appl. Mater. Interf.** 2020, DOI: 10.1021/acsami.0c16514.
- 219 Y. R. Yang, T. Zhu, C. Chi, L. Liu, J. Zheng, **X. Gong\***  
All-Solid-State Asymmetric Supercapacitors with Novel Ionic Liquid Gel Electrolytes  
**ACS Appl. Elec. Mater.**, 2020, DOI: 10.1021/acsaelm.0c00759.
- 218 W. Z. Xu, X. Yao, H. D. Wu, T. Zhu, **X. Gong,\***  
The compositional engineering of organic-inorganic hybrid perovskites for high-performance perovskite solar cells  
**Emergent Materials**, 2020, DOI: 10.1007/s42247-020-00128-8.
- 217 T. Zhu, Y. R. Yang, Y. H. Liu, R. Lopez-Hallman, Z. H. Ma, L. Liu, and **X. Gong\***  
Wireless portable light-weight self-charging power packs by perovskite-organic tandem solar cells integrated with solid-state asymmetric supercapacitors  
**Nano Energy**, 2020, 78, 105397.
- 216 W. Z. Xu, T. Zhu, H. D. Wu, L. Liu, **X. Gong\***  
Poly(Ethylene Glycol) Diacrylate as the Passivation Layer for High-Performance Perovskite Solar Cells  
**ACS Applied Materials & Interfaces**, 2020, DOI: 10.1021/acsami.0c11468
- 215 D. Zhang, Y. J. Tang, Y. X. Zhang, F. Y. Yang, Y. L. Liu, X. Y. Wang, **X. Gong**, J. Zheng  
Highly Stretchable, Self-Adhesive, Biocompatible, Conductive Hydrogels as Fully Polymeric Strain Sensors  
**J. Mater. Chem. A.** 2020, DOI:10.1039/d0ta07390c
- 214 W. Z. Xu, T. Zhu, Y. R. Yang, L. Y. Zheng, L. Liu, and **X. Gong\***  
Enhanced Device Performance of Perovskite Photovoltaics by Magnetic Field-Aligned Perovskites-Magnetic Nanoparticles Composite Thin Films  
**Adv. Fuc. Mater.**, 2020, DOI:10.1002/adfm.202002808.
- 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, 8, 3814-3828.
- 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<sub>x</sub> 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<sub>3</sub>NH<sub>3</sub>PbI<sub>2.55</sub>Br<sub>0.45</sub>:Zn<sub>2</sub>SnO<sub>4</sub> bulk heterojunction composite  
**Emergent Materials**, 2020, DOI: 10.1007/s42247-020-00072-7.
- 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. Zhang, J. Zheng  
Multiple Physical Bonds to Realize Highly Tough and Self-Adhesive Double-Network Hydrogels  
**ACS Appl. Polymer Mater.** 2019, DOI:10.1021/acsapm.9b00889
- 202 B. P. Ren, Y. X. Zhang, M. Z. Zhang, Y. L. Liu, D. Zhang, **X. Gong**, 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 S. Y. Zhou, T. Zhu, L. Y. Zheng, D. Zhang, W. Z. Xu, L. Liu, G. Cheng, J. Zheng, **X. 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, 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\***

- The 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<sub>2</sub>SnO<sub>4</sub> 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<sub>2</sub> and Hydrophilic Carbon Cloth@Polypyrrole 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.
- 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  $\beta$  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 a spectral response up to 2.5  $\mu\text{m}$   
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.
- 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. Mater. 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 Adsorption,  
**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 of 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  $\text{Ni}_{0.85}\text{Se}@\text{MoSe}_2$  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 Zn<sub>2</sub>SnO<sub>4</sub> 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.
- 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**, 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, **X. Gong**, L. Ying, F. Huang, Y. Cao  
Synthesis of medium-bandgap  $\pi$ -Conjugated polymers based on isomers of 5- Alkylphenanthridin-6(5H)-one and 6-Alkoxyphenanthridine  
**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, 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<sub>x</sub> 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<sub>x</sub> 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.
- 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<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> 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\***, 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.
- 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 hIAPP and rIAPP oligomers  
**Phys. Chem. Chem. Phys.**, 2015, 17, 10373-10382.
- 138 K. Wang, C. Liu, P. C. Du, J. Zheng and **X. Gong\***  
Bulk Heterojunction 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  $\text{CH}_3\text{NH}_3\text{PbI}_{3-x}\text{Cl}_x$  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 Heterojunction 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.
- 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, F. Huang, **X. Gong\*** and Y. Cao  
High-Performance Inverted Organic Photovoltaics with Over 1- $\mu\text{m}$  Thick Active Layers  
**Adv. Eng. Mater.**, 2014, DOI: 10.1002/aenm.201400378.
- 129 C. Yi, K. Yue, H. Ren, W. B. Zhang, L. Huang, G. R. Newkome, S. Z. D. Cheng, **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  $\text{Fe}_3\text{O}_4$  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<sub>x</sub> 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, Y. C. Li, **X. Gong**, F. Huang, 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\***  
A solution-processable diketopyrrolopyrrole dye molecule with (fluoronaphthyl)thienyl endgroups for organic solar cells  
**Dyes and Pigments**, 2014, 101, 51-57.
- 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-soluble CdTe 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<sub>3</sub>O<sub>4</sub> 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<sup>3+</sup> 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. Ying, S.J. Su, **X. Gong**, F. Huang, 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, **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-chloronaphthalene as the solvent additive  
**Synthetic Metals**, 2013, 164, 1.
- 108 H. Ye, X. W. Hu, Z. X. Jiang, D. C. Chen, X. Liu, X. H. Nie, S. J. Su, **X. Gong**, Y. Cao  
Pyridinium salt-based molecules as cathode interlayers for enhanced performance in polymer solar cells  
**J. Mater. 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.
- 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, **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, **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, F. Huang, L. Huang, J. B. Peng, **X. Gong**,\* S. Z. D. Cheng, Y. Cao  
Polymer solar cells with a low temperature-annealed sol-gel-derived MoO<sub>x</sub> 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, **X. Gong**,\* S. Z. D. Cheng, B. B. Y. Hsu, 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.
- 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, 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 MoO<sub>x</sub> 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.
- Prior to 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, **X. Gong**, K. W. Plaxco, 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, **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, 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, 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, Y. Xiao, D. Kang, **X. Gong**, B. Y. Hsu, A. J. Heeger, 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, **X. Gong**, 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, Y. Xiao, **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.
- 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, Y. Cao, G. Yu, C. L. Shieh, B. Nilsson, 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-emitting diodes  
*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.
- 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-based titanium oxide as an optical spacer  
**Adv. Mater.**, 2006, 18(5), 572.
- 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.
- 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 polyfluorene 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-emitting diodes.  
**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.
- 55 **X. Gong**, J. C. Ostrowski, G. C. Bazan, D. Moses, A. J. Heeger, M. S. Liu, A. K.-Y. Jen  
Electrophosphorescence from a conjugated copolymer 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.
- 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.
- 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  $\text{MSO}_4:\text{xSm}^{3+}$  (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  $\text{MSO}_4:\text{xTb}^{3+}$  (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  $\text{MSO}_4:\text{xEu}^{3+}$  (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'-bipyridyl complexes with bipolar character  
**Appl. Phys. Lett.**, 2000, 75, 3920.
- 38 W. K. Chan, P. K. Ng, **X. Gong**, et al.  
Synthesis and electronic properties of conjugated polymers based on rhenium or ruthenium dipyrrophenazine 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.
- 35 **X. Gong**, P. Wu, W. Chen, and H. X. Yang,  
Preparation and optical properties of nanocrystallines  $\text{RE}_2\text{Sn}_{2-x}\text{B}'_x\text{O}_7$  (RE=Sm, Ce; B'= Fe, Co, Ni; x= 0.0 -1.0)  
**J. Mater. Res.**, 1998, 13 (2), 467.
- 34 **X. Gong**, W. Chen, et al.,  
Photoluminescence and up-conversion optical properties of nanocrystallines  $\text{CaS}:\text{Sm}^{3+}$   
**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. Mater**, 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  
**Macromolecules**, 1998, 31(17), 5639.
- 31 P. Wu, **X. Gong**, et al.,  
Image storage based on biphotonic holography 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. Rev. B**, 1998, 57, 3874.
- 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-containing poly(p-phenylenevinylene)s  
**Appl. Phys. Lett.**, 1997, 71, 2919.
- 27 P. K. Ng, **X. Gong**, and W.K. Chan.  
Quinoxaline-based conjugated polymers containing ruthenium(II) bipyridine metal  
complex  
**Macromol Rapid Commun.**, 1997, 18, 1007.
- 26 P. Wu, **X. Gong**, et al.,  
Biphotonic 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.**

#### B: 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 Müllen, 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.

### C: 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-responsivity  
**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, Guillermo 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-responsivity  
**Gong, Xiong**; Cheng, Stephen Z. D., WO 2014089066 A1 20140612.
- 8 Broadband polymer photodetectors using zinc oxide nanowire as an electron-transporting layer  
**Gong, Xiong**US 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.

#### D: Invited Presentations and/or Seminars

- 166 "Novel Perovskites for Solar Energy Generation", University of Cincinnati, Jan. 20, 2022.
- 165 "Novel Electronic Materials for Energy Generation and Storage" INDIAN INSTITUTE OF SCIENCE ENGINEERING AND RESEARCH (IISER), KOLKATA, Indian, March 4, 2021
- 164 "Novel Electronic Materials for Energy Generation and Storage" Department of Chemical Engineering, University of Auburn, May, 2020
- 163 "High Performance Solution-Processed Perovskite Solar Cells", Institute of Advanced Materials, Kent State University, March, 2020,
- 162 "High Performance Solution-Processed Perovskite Solar Cells via Novel Materials and Device Engineering", University of Connecticut, Department of Chemical and Engineering and Materials Institute, April 8, 2020.
- 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 Photo-Chemistry, 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" Jiangnan 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 from 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-tuning crystallization morphology" MRS Fall Conferences, Nov. 30th, 2014, Boston, MA,.
- 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  $\mu\text{m}$  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

## GRANTS

### 1. Current grants

- Title: Bulk heterojunction perovskite solar cells by novel perovskite materials

Award Amount: \$483,000

Source: NSF

Role: PI

Period: July 2019 - June 2022

- Title: Uncooled broadband solution-processed photodetectors

Total Award Amount: \$819,543

Source: Air Force Scientific Research

Role: PI

Period: sept. 2015 - Dec. 2021

- Title: "Novel Polymers: Characterization and Applications"

Award Amount: \$100,000

Source: 1 -Material Inc.

Role: PI

Time period: July 2020 - December 2025

- Title: Trust in Flexible and Hybrid Electronics

Total Award Amount: \$1 .78M

Source: Air Force Scientific Research

Role: Co-PI

Period: Sept. 2018 - April 2022

- Title: REU Supplement

Total Award Amount: \$8,000

Source: NSF

Role: PI

Period: July 2021 – June 2023

### 2. Pending proposals

- Title: Perovskites co-crystallized with polymers for approaching high performance broadband perovskite photodetectors

Source: Air Force Scientific Research Program

Award Amount: \$648,300

Role: PI

Period: July 1, 2022- June 31, 2025

- Title: Hysteresis-free, stable, and efficient solution-processed perovskites solar cells by hybrid perovskites co-crystallized with polymers

Source: ENI

Award Amount: \$200,000

Role: PI

Period: July 1, 2022- June 31, 2024

- Title: Stable and efficient solar cells by novel perovskites and interfacial engineering

Source: DOE

Award Amount: \$1,500,000

Role: PI (Co-PI: Prof. Jean-Luc Bradas at University of Arizona)

Period: July 1, 2022- June 30, 2024

- Title: Uncooled ultrasensitive solution-processed flexible broadband photodetectors

Source: NSF

Award Amount: \$640,338

Role: PI

Period: July 1, 2022- June 30, 2025

- Title: perovskite-organic ternary solar cells

Source: DOE

Award Amount: \$300,000

Role: PI

Period: July 1, 2022- Dec. 30, 2023

- Title: Charge carrier mobility in perovskite and organic semiconductors

Source: Air Force Scientific Research Program

Award Amount: \$280,000

Role: PI

Period: July 1, 2022- June 30, 2025

### 3. Past grants

- Title: High-performance electrophosphorescence polymer light-emitting diodes

Source: Mitsubishi Chemical Corporation

Award Amount: \$1,500,000

Time period: Aug. 2002 - Aug. 2006

Role: Co-PI (PI: Prof. A. J. Heeger)

- Title: Hemispherical Array Detector for Imaging

Source: DARPA

Award Amount: \$25,500,000

Time period: July 2007 - Dec. 2010

Role: Co-PI (PI: Prof. A. J. Heeger)

- Title: Organic electronics

Source: The University of Akron

Award amount: \$500,000

Time period: Aug. 2010 - July 2014

Role: PI

- Title: Novel Polymer/Organic Materials

Source: Gift from ONE

Award Amount: \$450,000

Role: PI

Period: July 2012 – Aug. 2015

- Title: Ultrasensitive solution-process inverted polymer photodetectors

Award Amount: \$408,000

Source: NSF

Role: PI

Time Period: July 2014 – Aug. 2020

- Title: Polymer photodetectors



- Award Amount: \$1,500,000  
Source: Gift from UCSB  
Role: PI  
Period: July 2016 – Aug. 2017
- Title: POSS-polymer for flexible electronics  
Source: DOE  
Award Amount: \$10,000  
Time period: July 2012 - Aug. 2012  
Role: PI
  - Title: In-situ Neutron Scattering Determination of 3D Phase-Morphology Correlations in Fullerene-Block Copolymer Systems Block Copolymer System  
Source: DOE  
Award Amount: \$831,066  
Role: Co-PI  
Time period: Sept. 2012 — Aug. 2014
  - Title: Polymer electronics  
Source: 3M Company  
Award Amount: \$45,000  
Role: PI  
Time period: July 2011 - June 2014
  - Title: "High-Performance Inverted Polymer Solar Cells"  
Source: BringSpring Science and Technology  
Award Amount: \$1,000,000  
Role: PI  
Time period: March 2013 - March 2016
  - Title: Polymer processing  
Source: System Seals Inc.  
Award Amount: \$21, 658  
Role: PI  
Time period: Feb. 2013 - sept. 2013
  - Title: "Special Bayer Lectureship" 2013  
Source: Bayer MaterialScience  
Award Amount: \$8,000  
Role: PI
  - Title: "Special Aldrich Lectureship" 2014  
Source: Aldrich Material Science  
Award Amount: \$3,500  
Role: PI

## SERVICES

### 1. Professional Society

Associate Editor: Organic Electronics

Deputy Editor: Emergent Materials

Editorial Board Members: Scientific Reports, Polymers, and Chinese Chemistry Letter

**2. Committees at UA**

UA Research Committee, University Library, Graduate Program Review; Admissions; Faculty Search (5 times); University Library; Dean Search; University Research, Director Search, etc.

**3. Review Panels**

Air Force Scientific Program, NSF, Canada NSF, Swiss NSF, Hong Kong Research Foundation, Iowa State Research Foundation, AAAS

**4. Conference Organizer**

2014 ACS Dallas; 2015 PPS Cleveland; 2016 ACS Philadelphia; 2016 ICSM Guangzhou; 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)