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■ 院士

■ 万人计划

■ 创新人才推进计划

■ 杰出青年

■ 国家百千万人才工程

■ 优秀青年

■ 研究员

■ 副研究员

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简历:

2013年3月至今 中国科学院长春应用化学研究所 研究员, 博士生导师

2011年01月至2013年01月 美国凯斯西储大学高分子科学与工程系 研究助理

2009年01月至2010年12月 美国加州大学洛杉矶分校材料科学与工程系 博士后

2007年03月至2008年12月 德国维尔茨堡大学有机化学研究所 洪堡奖学金获得者

2001年09月至2007年01月 中国科学院长春应用化学研究所 获理学博士学位

1997年09月至2001年07月 武汉大学化学学院化学基地班 获化学学士学位

研究领域:

应用于高分子太阳能电池的共轭高分子材料 (PSCs)

应用于高分子太阳能电池的溶液加工的石墨烯衍生物

高分子发光材料

获奖及荣誉:

2013年中组部青年千人计划

2009年全国百篇优秀博士学位论文

2008年中国科学院50篇优秀博士学位论文

2007年德国洪堡奖学金

2006年中国科学院院长奖学金优秀奖

代表论著:

2013年建立课题组后:

1. Z. C. Ding, J. Liu*, L. M. Dai*, et al., Few-Layered Graphene Quantum Dots as Efficient Hole-Extraction Layer for High-Performance Polymer Solar Cells, *Nano Energy*, 2015, in press.

2. C. D. Dou, J. Liu*, et al., Developing Conjugated Polymer with High Electron Affinity via Replacing a C-C Unit by a B-N Unit, *Angew. Chem. Int. Ed.*, 2015, 54, 3648. (被选为内封面、热点文章予以重点介绍)

3. B. Meng, J. Liu*, L. X. Wang*, et al., Phosphonated Conjugated Polymers for Polymer Solar Cells with Non-Halogenated Solvent Process, *Polym. Chem.*, 2015, 26, 805.

4. J. Liu*, L. M. Dai*, et al., Graphene Oxide Derivatives as Hole- and Electron-Extraction Layers for High-Performance Polymer Solar Cells, *Energy Environ. Sci.*, 2014, 7, 1297.

5. J. Liu, L. M. Dai*, et al., Graphene Oxide Nanoribbon as Hole Extraction Layer to Enhance Efficiency and Stability of Polymer Solar Cells, *Adv. Mater.*, 2014, 26, 786.

6. L. Zhang, J. Liu*, et al., Rationally Designed Surfactants for Few-Layered Graphene Exfoliation: Ionic Groups Attached to Electron-Deficient pi-Conjugated Unit through Alkyl Spacers, *ACS Nano*, 2014, 8, 6663.

7.B. Meng, J. Liu*, L. X. Wang*, et al., Phosphonate-Functionalized Donor Polymer as an Underlying Interlayer to Improve Active Layer Morphology in Polymer Solar Cells, *Macromolecules*, 2014, 47, 6246.

2013年建立课题组前:

1.J. Liu, L. M. Dai*, et al., Hole and Electron Extraction Layers Based on Graphene Oxide Derivatives for High-Performance Bulk Heterojunction Solar Cells, *Adv. Mater.*, 2012, 24, 2228.

2.J. Liu, L. M. Dai*, et al., Highly Crystalline and Low Bandgap Donor Polymers for Efficient Polymer Solar Cells, *Adv. Mater.*, 2012, 24, 538.

3.J. Liu, L. M. Dai*, et al., Sulfated Graphene Oxide as a Hole-Extraction Layer in High-Performance Polymer Solar Cells, *J. Phys. Chem. Lett.*, 2012, 3, 1928.

4.J. Liu, L. M. Dai*, et al., Graphene Materials for Energy-Related Application, *MRS Bulletin*, 2012, 37, 1265.

5.Y. H. Xue, J. Liu, L. M. Dai*, et al., Nitrogen-Doped Graphene Foams as Metal-Free Counter Electrodes in High-Performance Dye-Sensitized Solar Cells, *Angew. Chem. Int. Ed.*, 2012, 51, 12124. (内封面)

6.J. Liu, Q. B. Pei*, et al., Conjugated Polymer as Host for High Efficiency Blue and White Electrophosphorescence, *Macromolecules*, 2011, 44, 2451.

7.J. Liu, Q. B. Pei*, et al., Ambipolar Poly(meta-phenylene) Copolymer with High Triplet Energy as Host for Blue and Green Electrophosphorescence, *J. Mater. Chem.*, 2011, 21, 9772.

8.J. Liu, Q. B. Pei*, et al., Poly(meta-phenylene): Conjugated Polymer Host with High Triplet Energy for Efficient Blue Electrophosphorescence, *Macromolecules*, 2010, 43, 9608.

9.J. Liu, Q. B. Pei*, et al., Electrophosphorescent Polymers for High-Efficiency Light-Emitting Diodes, *Curr. Org. Chem.*, 2010, 14, 2133.

10.J. Liu, L. X. Wang*, et al., White Electroluminescence from a Star-Shaped Like Polymer with an Orange Emissive Core and Four Blue Emissive Arms, *Adv. Mater.*, 2008, 20, 1357.

11.J. Liu, L. X. Wang*, et al., Novel White Electroluminescent Single Polymer Derived from Fluorene and Quinacridone, *Macromolecules*, 2008, 41, 1162.

12.J. Liu, L. X. Wang*, et al., Highly Efficient Red Electroluminescent Polymers with Dopant/Host System and Molecular Dispersion Feature: Polyfluorene as the Host and 2,1,3-Benzothiadiazole Derivative units as the Red Dopants, *J. Mater. Chem.*, 2008, 18, 319.

13.J. Liu, L. X. Wang*, et al., Blue Electroluminescent Polymers with Dopant/Host System and Molecular Dispersion Feature: Polyfluorene as the Deep-blue Host and 1,8-Naphthalimide Derivative Units as the Light-blue Dopants, *J. Mater. Chem.*, 2008, 18, 1659.

14.J. Liu, L. X. Wang*, et al., Molecular Design on Highly Efficient White Electroluminescence from a Single Polymer System with Simultaneous Blue, Green and Red Emission, *Adv. Mater.*, 2007, 19, 531.

15.J. Liu, L. X. Wang*, et al., White Electroluminescence from a Single Polymer System: Improved Performance by Means of Enhanced Efficiency and Red-Shifted Luminescence of the Blue-Light-Emitting Species, *Adv. Mater.*, 2007, 19, 1859.

16.J. Liu, L. X. Wang*, et al., Three-Color White Electroluminescence from a Single Polymer System with Blue, Green and Red Dopant Units as Individual Emissive Species and Polyfluorene as Individual Polymer Host, *Adv. Mater.*, 2007, 19, 4224.

17.J. Liu, L. X. Wang*, et al., White Electroluminescence from a Single-Polymer System with Simultaneous Two-Color Emission: Polyfluorene as Blue Host and 2,1,3-Benzothiadiazole Derivatives as Orange Dopants on the Side Chain, *Adv. Funct. Mater.*, 2007, 17, 1917.

18.J. Liu, L. X. Wang*, et al., Green Light-Emitting Polyfluorenes with Improved Color Purity Incorporated with 4,7-Diphenyl-2,1,3-Benzothiadiazole Moieties, *J. Mater. Chem.*, 2007, 17, 2832.

19.J. Liu, L. X. Wang*, et al., White Electroluminescence from a Single Polymer System with Simultaneous Two Color Emission: Polyfluorene as Blue Host and 2,1,3-Benzothiadiazole Derivative Unit as Orange Dopant on the Main Chain, *Adv. Funct. Mater.*, 2006, 16, 957. (封面)

20.J. Liu, L. X. Wang*, et al., Blue Light-Emitting Polymer with Polyfluorene as the Host and Highly Fluorescent 4-Dimethylamino-1,8-Naphthalimide as the Dopant in the Side Chain, *Appl. Phys. Lett.*, 2006, 88, 083505.

21.J. Liu, L. X. Wang*, et al., Highly Efficient Green Light Emitting Polyfluorene Incorporated with 4-Diphenylamino-1,8-Naphthalimide as Green Dopant, *J. Mater. Chem.*, 2006,

16, 1431.

22. J. Liu, L. X. Wang*, et al., The First Single Polymer with Simultaneous Blue, Green, and Red Emission for White Electroluminescence, *Adv. Mater.*, 2005, 17, 2974.



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