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特聘研究员，北京大学化学与分子工程学院；研究员，北京大学软物质科学与工程中心
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受教育和研究经历

- 2014/02- 特聘研究员，北京大学化学与分子工程学院
研究员，北京大学软物质科学与工程中心
研究方向：高分子化学与材料，生物医药工程，免疫医学
- 2011/07 – 2014/05 博士后， Scripps 研究所化学系
研究方向：位点特异的抗体偶联物的合成及其在癌症治疗的应用
导师: Prof. Peter G. Schultz
- 2006/08 – 2011/05 博士，美国伊利诺伊大学香槟分校材料系
研究方向：NCA 开环聚合和聚多肽高分子的合成及其在生物医药的应用
导师: Prof. Jianjun Cheng
- 2002/09 – 2006/07 学士，北京大学化学与分子工程学院
研究方向：磁性金属-有机框架化合物，导师：高松教授
有机与高分子发光二极管材料，导师：裴坚教授

获奖及荣誉

- 2013 ACS-AkzoNobel 杰出高分子化学研究生奖(每年只有一位获奖者)
- 2012 IUPAC 青年化学家，提名奖
- 2011-2014 Damon Runyon 癌症研究基金会博士后奖学金
- 2011 伊利诺伊大学材料系 Racheff-Intel Awards
- 2010 国家优秀自费留学生奖
- 2010 伊利诺伊大学工程学院 Yee 纪念奖学金
- 2010 美国化学会年会优秀高分子研究生论坛
- 2002-2006 北京大学明德奖学金（四年）
- 2002 第 34 届国际化学奥林匹克竞赛金牌

已发表论文

- [24] **Hua Lu**[†], Quan Zhou[†], Vishal Deshmukh[†], Hardeep Phull, Jennifer Ma, Virginie Tardif, Rahul R. Naik, Claire Bouvard, Yong Zhang, Seihyun Choi, Brian R. Lawson, Shoutian Zhu, Chan Hyuk Kim*, and Peter G. Schultz*, “Targeting Human C-Type Lectin-Like Molecule-1 (CLL1) with a Bispecific Antibody for Acute Myeloid Leukemia Immunotherapy”, *Angew. Chem. Int. Ed.* **2014**, 53, DOI: 10.1002/anie.201405353 ([†]**equal contribution**)
- [23] Nan Zheng, Lichen Yin, Ziyuan Song, Liang Ma, Haoyu Tang, Nathan P. Gabrielson, **Hua Lu**, and Jianjun Cheng*, “Maximizing gene delivery efficiencies of cationic helical polypeptides via balanced membrane penetration and cellular targeting”, *Biomaterials*, **2014**, 35, 1302-1314
- [22] **Hua Lu***, Jing Wang, Ziyuan Song, Lichen Yin, Yanfeng Zhang, Haoyu Tang, Chunlai Tu, Yao Lin* and Jianjun Cheng*, "Recent Advances in Amino Acid N-Carboxyanhydrides and Synthetic Polypeptides: Chemistry, Self-assembly and Biological Applications", *Chem. Comm.* **2014**, 50, 139-155
- [21] **Hua Lu**[†], Danling Wang[†], Stephanie Kazane, Tsotne Javahishvili, Feng Tian, Frank Song, Aaron Sellers, Barney Barnett and Peter G. Schultz*, "Site-specific Antibody-polymer Conjugates for siRNA Delivery ", *J. Am. Chem. Soc.*, **2013**, 135, 13885–13891 ([†]**equal contribution**)
- [20] Yanfeng Zhang, Qian Yin, **Hua Lu**, and Hongwei Xia, Yao Lin Jianjun Cheng*, “PEG-Polypeptide Dual Brush Block Copolymers: Synthesis and Application in Nanoparticle Surface PEGylation”, *ACS Macro. Lett.*, **2013**, 2, 809-813
- [19] Lichen Yin, Haoyu Tang, Kyung Kim, Nan Zheng, Ziyuan Song, Nathan Gabrielson, **Hua Lu**, and Jianjun Cheng*, “Light-Responsive Helical Polypeptides Capable of Reducing Toxicity and Unpacking DNA toward Non-Viral Gene Delivery”, **2013**, *Angew. Chemie. Int. Ed.*, 52, 9182-9186
- [18] Jing Wang, Hongwei Xia, Yanfeng Zhang, **Hua Lu**, Ranjan Kamat, Andrey V. Dobrynin, Jianjun Cheng* and Yao Lin*, “Nucleation-Controlled Polymerization of Nanoparticles into Supramolecular Structures”, *J. Am. Chem. Soc.*, **2013**, 135, 11417-11420
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- [17] Jonathan Yen, Yanfeng Zhang, Nathan Gabrielson, Lichen Yin, Linna Guan, Isthier Chaudhury, **Hua Lu**, Fei Wang* and Jianjun Cheng*, “Cationic, helical polypeptide-based gene delivery for IMR-90 fibroblasts and human embryonic stem cell”, *Biomater. Sci.*, **2013**, 1, 719-727
- [16] Lichen Yin, Ziyuan Song, Kyung Hoon Kim, Nan Zheng, Haoyu Tang, **Hua Lu**, Nathan Gabrielson, Jianjun Cheng*, “Reconfiguring the architectures of cationic helical polypeptides to control non-viral gene delivery”, *Biomaterials*, **2013**, 34, 2340-2349

- [15] Haoyu Tang, Lichen Yin, **Hua Lu**, and Jianjun Cheng*, "Water-Soluble Poly(L-serine)s with Elongated and Charged Side-Chains: Synthesis, Conformations and Cell-Penetrating Properties", *Biomacromolecules*, **2012**, 13, 2609-2615
- [14] Nathan Gabrielson, **Hua Lu**, Lichen Yin, Kyung Hoon Kim and Jianjun Cheng*, "A Cell-Penetrating Helical Polymer for siRNA Delivery to Mammalian Cells ", *Mol. Ther.* **2012**, 20, 1599-1609
- [13] Nathan Gabrielson[†], **Hua Lu**[†], Lichen Yin, Dong Li, Fei Wang, and Jianjun Cheng*, "A Reactive Cationic α -Helical Polypeptide Template for Non-Viral Gene Delivery", *Angew. Chem. Int. Ed.* **2012**, 51, 1143-1147 ([†]**equal contribution**)
Highlighted by Chemical and Engineering News, issue of Dec. 19, 2011;
reported by ScienceDaily, PhysOrg, and EurekAlert! etc.
- [12] Kuan-Ju Chen, Li Tang, Mitch Andre Garcia, Hao Wang, **Hua Lu**, Wei-Yu Lin, Shuang Hou, Qian Yin, Clifton K.-F. Shen, Jianjun Cheng* and Hsian-Rong Tseng*, "The therapeutic efficacy of camptothecin-encapsulated supramolecular nanoparticles", *Biomaterials*, **2012**, 33, 1162-1169
- [11] **Hua Lu**, Jing Wang, Yugang Bai, Jason Long, Shiyong Liu*, Yao Lin* and Jianjun Cheng*, "Ionic Polypeptides with Unusual Helical Stability", *Nat. Commun.*, **2011**, 2, 206
reported by NSF, ScienceDaily, PhysOrg, EurekAlert! and ChemistryViews etc.
- [10] Jing Wang, **Hua Lu**, Ranjan Kamat , Sai Venkatesh Pingali , Volker S. Urban, Jianjun Cheng* and Yao Lin*, "Supramolecular Polymerization from Polypeptide-Grafted Comb Polymers", *J. Am. Chem. Soc.* **2011**, 133, 12906-12909.
Highlighted by Chemical and Engineering News, issue of Aug. 15, 2011.
- [9] Jing Wang, **Hua Lu**, Yuan Ren, Yanfeng Zhang, Martha Morton, Jianjun Cheng* and Yao Lin*, "Interrupted Helical Structure of Grafted-Polypeptides in Brush-like Macromolecules", *Macromolecules*, **2011**, 44, 8699-9709
- [8] **Hua Lu**, Yugang Bai, Jing Wang, Yao Lin and Jianjun Cheng*, "Controlled Ring-Opening Polymerization of γ -(4-Vinylbenzyl)-L-Glutamate N-Carboxyanhydride for the Synthesis of Functional Polypeptides", *Macromolecules*, **2011**, 44, 6237-6240
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- [7] Yanfeng Zhang, **Hua Lu**, Yao Lin and Jianjun Cheng*, "Water-Soluble Polypeptides with Elongated, Charged Side Chains Adopt Ultrastable Helical Conformations", *Macromolecules*, **2011**, 44, 6641-6644
- [6] Yugang Bai, **Hua Lu**, Ettigounder Ponnusamy, and Jianjun Cheng*, "Synthesis of Hybrid Block Copolymers via Integrated Ring-Opening Metathesis Polymerization and Polymerization of NCA ", *Chem. Comm.* **2011**, 47, 10830-10832
- [5] **Hua Lu**, Jing Wang, Yao Lin* and Jianjun Cheng*, "One-Pot Synthesis of Brush-Like Polymers via Integrated Ring-Opening Metathesis Polymerization and Polymerization of

Amino Acid *N*-Carboxyanhydrides”, *J. Am. Chem. Soc.* **2009**, *131*, 13582-13583
Highlighted by *Chemical and Engineering News*, issue of Sept. 14, 2009.

- [4] **Hua Lu** and Jianjun Cheng*, “*N*-Trimethylsilyl amines for controlled ring-opening polymerization of amino acid *N*-carboxyanhydrides and facile end group functionalization of polypeptides”, *J. Am. Chem. Soc.* **2008**, *130*, 12562-12563
- [3] **Hua Lu** and Jianjun Cheng*, “Hexamethyldisilazane-Mediated Controlled Polymerization of alpha-Amino Acid *N*-Carboxyanhydrides”, *J. Am. Chem. Soc.* **2007**, *129*, 14115-14116
- [2] Xiaoyu Cao, Hong Zi, Wei Zhang, **Hua Lu**, and Jian Pei*, “Star-shaped and Linear Nanosized Molecules Functionalized with Hexa-peri-hexabenzocoronene: Synthesis and Optical Properties” *J. Org. Chem.* **2005**, *70*, 3645-3653
- [1] Xiaoyu Cao, Wenbin Zhang, Jinliang Wang, Xinhua Zhou, **Hua Lu**, and Jian Pei*, “Extended π -Conjugated Dendrimers Based on Truxene” *J. Am. Chem. Soc.* **2003**, *125*, 12430-12431

专利

- [1] Jianjun Cheng and **Hua Lu**, "Stable Helical Ionic Polypeptides", US 61/418,269, WO PCT/US2011/062656, 2011. (TF10060)

展板及报告

- 2014/06 邀请报告: 苏州大学纳米科学技术学院, 中国苏州
- 2013/11 邀请报告: 南京大学化学院高分子系 (11/18); 浙江大学化学与生物工程系 (11/25); 厦门大学化学生物学系 (11/29); 中国科学与技术大学高分子系 (12/03)
- 2013/09 246 届美国化学会年会邀请获奖报告, 美国印第安纳波利斯
- 2013/06 第一届 AkzoNobel 北美创新大会展板, 美国芝加哥
- 2012/12 邀请报告: 北京大学化学院高分子系报告, 中国北京
- 2011/09 Damon-Runyon Award Retreat 展板, 美国加州圣何塞
- 2011/05 Racheff-Intel Award 获奖报告, 美国 UIUC 大学
- 2010/09 口头报告: 中科院北京化学所 (9/19); 中国科学与技术大学高分子系 (9/23) 南京大学化学院 (11/18); 苏州大学化学系 (9/25); 上海交通大学化学系 (9/28); 上海大学化学系 (9/30)

教学与服务

- 2011- 杂志评审 (reviewer)

Adv. Mater., Macromolecules, ACS Macro Lett., Biomacromolecules, Polym. Chem., Adv. Healthcare Mater., Polymer, Macro. Rapid Commun., Biomaterials Sci., Org. Biomol. Chem., Adv. Funct. Mater., J. Polym. Sci. Part A: Polym. Chem., Int. J. Nanomedicine, Macro. Chem. Phys.

- 2011 海外人才走进中科院
- 2011 伊利诺伊大学材料系研究生课程“生物材料与纳米医药”助教
- 2011 英文授课“可控聚合在生物材料中的应用”
- 2009 美国化学会年会“高分子化学中的纳米科学”分会场主持
- 2007 伊利诺伊大学材料系研究生课程“生物材料的设计与应用”助教