Curriculum Vitae

Huisheng Peng, the University Professor
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Education and Employment

2008.10–now, Professor, Changjiang Chair Professor and the University Professor, Laboratory of Advanced Materials, Department of Macromolecular Science, Institute of Fiber Materials and Devices, Fudan University
2006.10–2008.09, Director's Postdoctoral Fellow, Los Alamos National Laboratory, USA
2003.08 – 2006.10, PhD, Department of Chemical and Biomolecular Engineering, Tulane University
2000.09–2003.06, MSc, Department of Macromolecular Science, Fudan University
1995.09–1999.06, BEng, Department of Polymer Materials Science and Engineering, Donghua University

Honor and Award

Discovery of Novel Calcium-Oxygen Batteries Selected as One of China's Major Scientific Advances of 2024 (2025.03), Top Ten Semiconductor Advances in China in 2024 (2025.01), Chambroad Technology Innovation Award by Chinese Chemical Society (2024.11), China's 2023 Annual Major Medical Advances (2024.04), Baosteel Excellent Teacher Award (2023.11), First Prize of National Teaching Achievement Award in 2022 (2023.07), Shanghai Labor Medal (2023.05), First Class of Shanghai Natural Science Award (2023.05), China's Top 100 Most Influential International Academic Papers in 2021 (2022.12), IUPAC Top Ten Technologies in Chemistry (2022.10), Xplorer Prize (2022.09), Grand Prize of Shanghai Education Award (2022.09), Shanghai Science and Technology Elite (2022.09), Falling Walls Foundation Winner in Engineering and Technology (2022.08), Fellow of Chinese Chemical Society (2022.07), Shanghai Most Beautiful Scientist (2022.05), Top Ten Optics Advances in China in 2021 (2022.03), Top Ten Technologies in China (2022.02), Top Ten Science Advances in China in 2021 (2022.02), Top Ten Semiconductor Advances in China in 2021 (2022.01), ACS Top Ten Chemistry Research(2021,12), 2021's Top Chemistry Research by C&EN (2021.12), Top Ten Social Influence Events in the Field of Optics in China in 2021 (2021.12), Polymer Science Innovation Paper Award of Chinese Chemical Society (2021.09), Second Class of National Natural Science Award (2020.01), Excellent Product Award of the 21st China Hi-Tech Fair for the Flexible Lithium-ion Battery (2019.11), Qian Baojun Fiber Award (2019.11), Shanghai Good Teacher (2019.08), Leo KoGuan Teaching Award by Fudan University (2018.12), Gold Award from International Exhibition of Inventions of Geneva (2018.04), Leading Talent of National Ten Thousand Plan (2017.12), National Outstanding Contribution Experts (2017.11), Leading Talent of National Hundred, Thousand and Ten Thousand Plan (2017.11), Top Ten Research Team at Fudan University (2017.11), The Most Creative 100 Persons by FastCompany (2017.08), National Natural Science Foundation of China Excellent Achievements for the Fiber-shaped Energy Device (2017.04), Innovation Leadership by Ministry of Science and Technology of China (2017.01), Shanghai Natural Science Peony Award (2016.10), Young Scientist Award by Chinese Society for Composite Materials (2015.06), Shanghai Outstanding Academic Leaders (2015.02), Excellent Organization Award by Chinese Materials Research Society (2015.01),

Shanghai Outstanding Ten Young People (2014.12), Changjiang Chair Professor, Ministry of Education of China (2014.11), National Excellent Scientist at Composite Materials, Chinese Society for Composite Materials (2014.07), The Best Graduate Advisor, Fudan University (2014.06), Fellow, Royal Society of Chemistry (2014.04), China Young Science and Technology Award (2013.12), DuPont Young Professor Award (2013.05), Biomatic Distinguished Faculty Award, Chinese-American Chemistry and Chemical Biology Professors Association (2013.04), Distinguished Young Scholar, National Natural Science Foundation of China (2012.12), China Outstanding Young Scholar (2012.12), Shanghai Professor of Special Appointment (Eastern Scholar) (2011.12), Shanghai Leading Talent (2010.12), Young Scientist Award by Chinese Chemical Society (2010.12), Excellent Graduate Advisor at Fudan University (2010.09), Li Foundation Heritage Prize for Excellence in Creativity, USA (2010.05), Chinese Chemical Society -Wiley Youth Chemical Paper Prize (2009.12), New Century Talent, Ministry of Education of China (2009.09), Shanghai Pujiang Talent (2009.06).

Activity and Service

Service in Academic Organization: Overseas Talent Recruitment Expert of Hunan Province (2026.03), Vice Chairman of the 2nd Council of the World Laureates Association Foundation (2026.02-2031.02), Academic Committee member of State Key Laboratory of Luminescent Materials and Devices, South China University of Technology (2025.05), Strategic Advisory Committee member of State Key Laboratory of Advanced Polymer Materials, Sichuan University (2025.05), Academic Committee member of State Key Laboratory of Molecular Engineering of Polymers(Fudan University) (2025.04-2030.03), Vice Chair of the Academic Committee of Key Laboratory of Advanced Energy Materials Chemistry ,Ministry of Education,(Nankai University) (2024.11), Chairman of the Academic Committee of Next-Generation Energy Storage Center, Southeast University (2024.09) , Vice Chairman of the First Committee on Flexible Electronics, Chinese Institute of Electronics (2024.09), Chairman of the Second Council, Division of Fiber Material Modification and Composite Technology, Chinese Materials Research Society (2024.07-2027.07) , Expert Committee Member of Shanghai Polymer Molecular Engineering Technical Service Platform (2024.03-2029.02), Development Strategy Consultant of College of Biological Science and Medical Engineering, Donghua University (2023.07), Organic Committee Member of Shanghai Society of Chemistry and Chemical Engineering (2022.10), Polymer Science Committee Member of the 31st Chinese Chemical Society (2022.10), Committee Member of Functional and Smart Material Project from Ministry of Science and Technology of China (2022.10), Adjunct Professor and Doctoral Supervisor of Nanjing University (2022.01), International Fellow of Japan Society of Vacuum and Surface Science (2021.11), Academic Committee Member of Zhejiang Sci-Tech University Zhejiang Province Smart Textile and Flexible Communication Key Laboratory (2021.10), Academic Committee Member of GUT Guangxi Electrical and Magnetic Chemical Functional Materials Key Laboratory (2021.05), Young Committee Member at World Laureates Association (2021.04), Council Member at Shanghai Society of Chemistry and Chemical Industry (2021.01), Member of the 8th Science and Technology Committee of Ministry of Education (2020.12), Member for Energy Chemistry at Chinese Chemical Society (2020.11), Academic Committee Member of Nankai University Advanced Energy Materials Chemistry Key Laboratory from Ministry of Education (2020.11), Member for New Materials at Shanghai Association of Science and Technology (2020.09), Academic Committee Member of HUST Energy Conversion and Storage Materials Chemistry Key Laboratory from Ministry of Education (2020.06-2024.06), Associate Director of Fiber Materials Division of Chinese Materials Research Society (2018.12), Member for Shanghai Graphene Industry Technology Functional Platform (2017.06), Honorary Director of the 7th Council for Chinese Society for Composite Materials (2016.11), Guest Professor of Central South University of Forestry and Technology (2016.11-), Expert at the

Science and Technology Commission for the Central Military Commission (2016.08-2021.09), Guest Professor of China Academy of Engineering Physics (2015.05-2017.05), Committee Member of Youth Union of Yangpu District in Shanghai (2015.03-), Committee Member of Shanghai Youth Union (2014.12-), Vice President of National Materials New Technology Development Research Institute (2014.11-), Council Member, Chinese Materials Research Society (for Nanomaterials) (2014.04-), Standing Director of China Energy Environmental Protection High-tech Industry Association (2013.10-2017.09), Technical Committee Member of National Aramid Fiber Engineering Center (2013.05-2017.05), Director of the Council for Chinese Society for Composite Materials (2012.09-2016.09), Adjunct Professor and Doctoral Supervisor of Tongji University (2008.10-2011.10).

Service in Academic Journal: Editor-in-chief of *New science* (2026.11), Editor-in-Chief of *Watt* (2025.09), Editor Board Member of *Fundamental Research(*2024.1-2026.12), Editor Board Member of *Science Bulletin* (2023.01), Editorial Board Member of *Science China Materials* (2022.12), Editorial Board Member of *Science & Technology Review* (2022.12-2026.12), Associate Editor of *International Journal of Smart and Nano Materials* (2022.12), Section Editor and Editorial Board Member of *National Science Review* (2022.12), International Advisory Editorial Board Member of *ChemNanoMat* (2022.10), Editorial Board Member of *Progress in Polymer Science* (2022.03), Editorial Board Member of *Journal of Textile Research* (2021.08), Editorial Board Member of *Nano Research Energy* (2022.01), Editorial Board Member of *Chinese Plastics* (2019.11), Editorial Advisory Board Member of *Advanced Fiber Materials* (2019.01), Editorial Advisory Board Member of *Advanced Functional Materials* (2018.11), International Editorial Advisory Board Member of *Advanced Materials Technologies* (2018.05), Associate Editor of *Science Bulletin* (2018.01-2022.12), International Editorial Advisory Board Member of *Chemistry–An Asian Journal* (2017.11), International Editorial Advisory Board Member of *Batteries & Supercaps* (2017.11), Editor Board Member of *Small Methods* (2016.08-), Editor Board Member of *Chinese Journal of Polymer Science* (2016.04-2019.04), Editor Board Member of *Acta Chimica Sinica* (2015.08-2018.08), Editor Board Member of *Science & Technology Review* (2015.01-2019.01), Chairman of Editorial Board of *ChemNanoMat* (by Wiley-VCH) (2014.10-2022.10), Editor Board Member of *Science China Materials* (2014.07-2018.07), Guest Editor of *Polymer Chemistry* (2012.10-2013.09), Guest Editor of *Advanced Materials* (2012.09-2013.09), Editor Board Member of *Scientific Reports* published by *Nature* (2012.01-2014.12).

Research Interest

We focus on the cross-disciplinary field among chemistry, physics, energy and biomedical science. We are creating new metal-backboned polymers, designing novel fiber electronics, making extremely high-energy-density devices from inner shell electrons, proposing fractional element and discovering new learning paradigms. The final goal is to make new materials and devices for real applications.

Book

11 Hao Sun, Zhibin Yang, Longbin Qiu, **Huisheng Peng**; Title: Wearable Solar Cells; Pages; Publisher: Wiley-VCH.

10 Jia Guo, Guosong Chen, Jianfeng Li, **Huisheng Peng**; Title: Molecular Engineering of Polymers-The Research Development at Department of Macromolecular Sciences, Fudan University; Pages; Publisher: Springer.

9 Jia Guo, Guosong Chen, Jianfeng Li, **Huisheng Peng**; Title: Research Progress in Polymer Molecular Engineering; Pages: 418; Publisher: Science Press; Publication Date: September

2023.

8 Ye Zhang, Lie Wang, Yang Zhao, **Huisheng Peng**; Title: Flexible Batteries; Pages: 226; Publisher: CRC Press, Publication Date: March 2022; ISBN: 9781032226545.

7 **Huisheng Peng**; Title: Fiber Electronics (in Chinese); Pages: 409; Publisher: Science Press; Publication Date: May 2021; ISBN: 9787030686633.

6 **Huisheng Peng**; Title: Fiber Electronics; Pages: 466; Publisher: Springer; Publication Date: December 2020; ISBN: 978-981-15-9944-6.

5 **Huisheng Peng**; Title: Are You Ready for Graduate Study; Pages: 220; Publisher: Fudan University Press; Publication Date: December 2019; ISBN: 978-7-309-14654-7/G×2037.

4 **Huisheng Peng**, Qingwen Li, Tao Chen; Title: Industrial Applications of Carbon Nanotubes; Pages: 508; Publisher: Elsevier; Publication Date: October 2016; ISBN: 978-0-323-41481-4.

3 **Huisheng Peng**, Xuemei Sun, Wei Weng, Xin Fang; Title: Polymer Materials for Electronic Applications; Pages: 386; Publisher: Elsevier; Publication Date: September 2016; ISBN: 978-0-12-811091-1.

2 **Huisheng Peng**; Title: Novel Fiber Materials and Devices; Pages: 205; Publisher: Science Press; Publication Date: February 2016; ISBN: 9787030466822.

1 **Huisheng Peng**; Title: Fiber-Shaped Energy Harvesting and Storage Devices; Pages: 218; Publisher: Springer; Publication Date: January 2015; ISBN: 978-3-662-45744-3.

Book Chapter

7 Ye Zhang, Tingting Ye, Luhe Li, **Huisheng Peng**, Chapter: Carbon Nanotubes for Flexible Fiber Batteries; Book: Nanoporous Carbons for Soft and Flexible Devices; Publisher: Springer; Publication Date: 2020.

6 Bai Yang, Zhixiang Wei, Yi Zhang, Xuemei Sun, **Huisheng Peng**; Chapter: Polymer Nanocomposite Materials; Book: Functional Polymer Materials; Publisher: Science Press; Publication Date: 2019.

5 **Huisheng Peng**, Yifan Xu, Jian Pan, Yang Zhao, Lie Wang, Xiang Shi; Chapter: Flexible Metal-Air Batteries; Book: Metal–Air Batteries: Fundamentals and Applications; Publisher: Wiley-VCH Verlag GmbH & Co. KgaA; Publication Date: 2018.

4 Xuemei Sun, Xin Lu, Xin Fang, **Huisheng Peng**; Chapter: Aligned Carbon Nanotube-Based Sensing Materials; Book: Chemical Functionalization of Carbon Nanomaterials: Chemistry and Applications; Publisher: Taylor & Francis Group-CRC Press; Publication Date: 2015.

3 **Huisheng Peng**, Hao Sun, Xuemei Sun; Chapter: Aligned Carbon Nanotubes and Their Hybrids for Supercapacitors; Book: Nanocarbons for Advanced Energy Storage; Publisher: Wiley-VCH Verlag GmbH & Co. KGaA; Publication Date: June 2014.

2 **Huisheng Peng**, Xuemei Sun, Tao Chen; Chapter: Polymer Composites with Carbon Nanotubes in Alignment; Book: Carbon Nanotubes-Polymer Nanocomposites; Publisher: INTECH; Publication Date: June 2011.

1 **Huisheng Peng**; Chapter: Self-Directed Assembly of Organosilanes into Helically Mesoporous Nanocomposites; Book: Mesoporous Materials: Properties, Preparation and Applications; Publisher: Nova Science Publishers Inc.; Publication Date: Quarter 3-4, 2009.

Publication (including 8 at *Nature*, 1 at *Science*, 14 at *Nature* sister journals, 5 at *Nature Communications*, 62 at *Advanced Materials*, 54 at *Angewandte Chemie International Edition,* 8 at *Journal of the American Chemical So ciety*, and 1 at *Physical Review Letters*)

459 Xinheng Yan, Peng Zhai, Sijia Yu, Chenglong Wang, Zhen Wang, Siyuan Wang, Shuxian Pang, Zhu He, Shuzhuang Wang, Sihui Yu, Yimeng Wang, Qin Tang, Jialin Li, Shurui Cong, Chumeng Jiang, Ziwei Liu, Wenjun Li, Pengzhou Li, Xiaocheng Gong, Wenna Wu, Haixin Yao, Xinyuan Yang, Mingzhuo Li, Wensi Zhu, Baojun Gu, Daosheng Deng, Luoran Shang, Xueying Chen, Lihua Zhang, Weichao Yu, Zhaoqing Tang, Ting Liu, Meng Liao, Chen Zhao, Songlin Zhang, Bingjie Wang, Peining Chen, Meifang Zhu, Xuemei Sun*, **Huisheng Peng***, "Eating battery noodles for in-body power", ***Science***, 2026, aec8672, accepted.

458 Jiahe Qu, Xiangran Cheng, Kun Zhang, Jifeng Wang, Chenhao Lu, Yunting Zhang, Kaiyuan Li, Yuanhong Cao, Longmei Ma, Yanan Zhang, Yiqing Cheng, Shiqi Sun, Haiyang Cheng, Fengliang Liu, Ying Wang, Chen Zhao, Meng Liao*, **Huisheng Peng**, Bingjie Wang*, "In Situ-Formed Adhesive Gel Polymer Electrolyte for Stabilizing High-Curvature Interfaces in Fiber Lithium-Ion Batteries", ***Small***, 2026, DOI:10.1002/smll.75913.

457 Kun Zhang, Yanfeng Zhang, Runze Zhang, You Pan, Jiaxin Li, Chen Zhao, Meng Liao*, Huisheng Peng, Bingjie Wang*, "Rapid Fabrication of High-Safety Fiber Batteries via in-situ UV-Initiated Polymerization-Extrusion Method", ***Advanced Fiber Materials***, 2026, s42765-026-00732-z.

456 Haixin Yao, Chuang Wang, Longmei Ma, Chuanfa Li, Fengliang Liu, Pengzhou Li, Zhe Yang, Kun Zhang, Yan'An Zhang, Jiahe Qu, Haiyang Cheng, Yuxuan Zhou, Chen Zhao*, Songlin Zhang, Chengsheng Gui, Meng Liao, **Huisheng Peng**, Bingjie Wang*, "Quaternary ammonium-mediated I+ complexation for stable high-energy four-electron aqueous fiber zinc-iodine batteries", ***Science China-Materials***, 2026, s40843-025-4107-x.

455 Qiuchen Xu, Shanshan Tang, **Huisheng Peng**, Yan Wang*, Hao Sun*, "Sulfur-chlorine redox chemistry towards sustainable electrochemical energy storage", ***Science Bulletin***, 2026, 71, 1862-1865.

454 Yuanyuan Zheng, Qian Ye, Haicheng Yao, Yichi Zhang, Huanhuan Liu, Yifeng Zhang, Duo Li, Jingxia Wu, Kun Zhang, Songlin Zhang, Xuemei Sun, Zhaohui Wang, Bingjie Wang*, **Huisheng Peng***, Peining Chen*, "Intelligent textile interface for robust multimodal biophysical sensing to enhance driving safety", ***Science Bulletin***, 2026, 71, 2022-2032.

453 Shuo Wang, **Huisheng Peng**, Hao Sun*, "Advancing electrolytes for sustainable cryogenic Li||Cl_2 batteries", ***Science China-Chemistry***, 2026, s11426-026-3420-9

452 Liyuan Wang, Chengqiang Tang, Zhengqi Han, Haixin Zhong, Kailin Zhang, Ziyi Xie, Hang Guan, Peng Zhai, Hongjian Li, Jiaheng Liang, Jiajia Wang, Jiawei Chen, Yiqing Yang, Ziwei Liu, Mingyi Huang, Sihui Yu, Qingquan Han, Xiangran Cheng, Jinyan Li, Jiahao Shen, Xiaofei Wang, Cheng Cao, Biqin Dong, Lihua Zhang, Qi Tong, Chen Zhao, Ya Huang, Bingjie Wang, Songlin Zhang, Peining Chen, Jue Deng*, Yuguo Yu*, Hongbo Yu, **Huisheng Peng***, Xuemei Sun*, "A Radial Modulus-Gradient Fiber for Chronic Recording and Decoding in Deep Brain", ***Advanced Materials***, 2026, 38.

451 Ya Huang*, Zhenlin Chen, Jingkun Zhou, Huiling Jia, Lung Chow, Yu Zhou, Shengxin Jia, Binbin Zhang, Faheem Ershad, Shubham Patel, Chun Ki Yiu, Yuyu Gao, Qiang Zhang, Xingcan Huang, Jian Li, Kuanming Yao, Guangyao Zhao, Peining Chen, **Huisheng Peng**, Dong Sun, Cunjiang Yu, Xinge Yu, "Drawn-on-skin electronic tattoo as

a closed-loop sensing-stimulation system for the muscles", ***Science Advances***, 2026, 12, eaed7673.

450 Xiaoju Zhao, Meng Liao, Shitao Geng, Yan Wang, Shuo Wang, Zhaofeng Ouyang, Qiuchen Xu, Bin Yuan, Chengxiao Zhang, Shanshan Tang, Lei Ye, Liang Wu, **Huisheng Peng**, Hao Sun*, "Synergistic sulfur-chlorine battery chemistry towards efficient energy storage", ***Nature Communications***, 2026, 17, 3088.

449 Renqian Hu, Peiyu Liu, Xiaokun Wang, Shuaici Cheng, Yichi Zhang, Kainan Hong, Ke Chen, Jingxia Wu*, Jiajun Qin*, **Huisheng Peng**, Peining Chen*, "Incorporating High-Dielectric-Constant Modified PVDF Into Alternating Current Electroluminescent Fibers to Boost Brightness", ***Small Methods***, 2026, 10.

448 Xinheng Yan, Xuemei Sun*, **Huisheng Peng**, "Scalable Vector-Stimuli-Responsive Magnetorheological Fibrous Materials Enable Active Smart Textiles", ***Advanced Fiber Materials***, 2026, 8, 404-406.

447 Jiajun Qin, Jiatian Song, **Huisheng Peng***, "An Exploration of Fractional Element", ***Chemical Research in Chinese Universities***, 2026, 42, 683-686.

446 Jinlong Hu, Runxin Li, Qiongfeng Zhan, Jiajun Qin, Dadong Wen, Bing Yi, **Huisheng Peng**, Zhihang Tang*, "Overcoming photovoltage deficit via phenylthiourea derivatives for efficient printed perovskite solar cells with enhanced stability", ***Journal Of Semiconductors***, 2026, 47, 22601.

445 Jing Zhou, Yumin Chen, Wei Mao, Long Jiang, Huangjian Chen, Yunzhan Ying, Yulong Wan, Shifan Zheng, Ju Lin, Shikun Liang, Yuyuan Yao, Bingjie Wang, Ye Zhang, Lihua Gan, **Huisheng Peng**, Lie Wang*, "Spatially decoupled single/dual-atomic sites with independent bifunctional activity for high-performance fiber zinc-air batteries", ***Science China-Materials,*** 2026, 69, 1581-1589.

444 Yiqing Yang, Jiajia Wang, Xingming Wen, Jingxia Wu, Sijia Yu, Yixuan Wang, Ziwei Liu, Peiwen Yu, Jianzheng Li, Chuangkai Wang, Difan Zhang, Wenjun Li, Sihui Yu, Tao Huang, Zhengfeng Zhu, Yajie Qin, Kai Lu, Shaoyong Zheng, Ze Xiong, Songlin Zhang, **Huisheng Peng**, Xuemei Sun*, "Advancing In Vivo Chemical Monitoring with an Interface-Free Implants-to-Textile Wireless System", ***Advanced Functional Materials***, 2026,202531948.

443 Zhen Wang, Ke Chen, Xiang Shi, Qinhao Du, Yulu Ai, Pengzhou Li, Li Yong, Xiao Sun, Ning Wang, Xuemeng Hu, Chen Lu, Chengqiang Tang, Liyuan Wang, Yuanyuan Zheng, Yichi Zhang, Hongyu Guo, Zhaofangzhou Pu, Xiaokun Wang, Yanan Zhang, Haibo Jiang, Yue Liu, Zhihang Tang, Lingsen You, Jue Deng, Renchao Che, Yue Gao, Songlin Zhang, Bingjie Wang, Xuemei Sun, Jiajun Qin, Ya Huang, Li Shen, Junbo Ge, Xiaoyang Zeng, Lin Chen, Peining Chen*, **Huisheng Peng***, “Fibre integrated circuits by a multilayered spiral architecture”, ***Nature***, 2026, 650, 102-109 .

442 Chen Zhao*, Yuhang Ge, Yi Jiang, Jiamin Chen, Fengliang Liu, Kai Mo, Liangyu Huang, Ke Yao, Meng Liao, Bingjie Wang, Bingsheng Tu, **Huisheng Peng***, "Inner-Shell Electron Transition for High-Density Energy Storage", ***Chinese Journal Of Chemistry***, 2026, 44, 1297-1302.

441 Yiqing Cheng, Yanan Zhang, Longmei Ma, Jiahe Qu, Shiqi Sun, Zhe Yang, Siwei Cao, Songlin Zhang, Chengsheng Gui, Meng Liao, Chen Zhao*, **Huisheng Peng**, Bingjie Wang*, "Synergistically Enhance the Mechanical and Electrochemical Properties of Fiber Batteries by Designing Aramid Fiber Skeletons", ***Small***, 2026, 22, e13724.

440 Yifeng Zhang, Shuya Hao, Yanruzhen Wu, Fuyao Huang, Jingyi Pang, Xuelu Wang, Xin Xu, Kaiwen Zeng, Gengfeng Zheng, **Huisheng Peng***, "Cobalt-Backboned Oligomer for

Record Photocatalytic CO2 Conversion to Ethanol", ***Angewandte Chemie-International Edition***, 2026, 65.

439 Wenjun Li, Haoyu Zhang, Qianfeng Wang, Yiqing Yang, Ziwei Liu, Jiajia Wang, Chengqiang Tang, Kun Zhang, Weiqiang Zhang, Chengyan Wang, Songlin Zhang, **Huisheng Peng**, Xuemei Sun*, "MRI-Compatible Fiber Ion Sensors Enable Simultaneous Monitoring of Extracellular Ion Fluctuation and Whole-Brain fMRI", ***Small Methods***, 2026, 10.

438 Shitao Geng, Bin Yuan, Xiaoju Zhao, Qiuchen Xu, Yan Wang, Zhaofeng Ouyang, Shanshan Tang, Shuo Wang, Chengxiao Zhang, Qianyun Chen, Meng Liao, Bingjie Wang, Chen Zhao, Weihua Jin, Zichuang Li, Tian-Nan Ye, Xueqing Gong, **Huisheng Peng**, Hao Sun*, "High-voltage anode-free sodium-sulfur batteries", ***Nature***, 2026, 649.

437 Hang Guan, Xiao Sun, Sijia Yu, Chengqiang Tang, Yiqing Yang, Wei He, Liyuan Wang, Lingsen You, Songlin Zhang, **Huisheng Peng**, Xuemei Sun*, "Implantable Knitted Fabric Structured Electrode for Monitoring and Treatment of Cardiac Arrhythmias", ***Advanced Functional Materials***, 2025, 35.

436 Jiuzhou Liu, Siwei Cao, Haoran Xu, Jiatian Song, Yichi Zhang, Jiamin Chen, Yedong Qin, Mingjie Cao, Wenjing Zhao, Qinhao Du, Zhengfeng Zhu*, **Huisheng Peng***, "Designing Hybrid Electrodes for Fiber Quantum Dot-Sensitized Solar Cells with Record 11.05% Efficiency", ***Advanced Functional Materials***, 2026, 36.

435 Chenhao Lu, Xiangran Cheng, Haibo Jiang, Yuanhong Cao, Jiahe Qu, Yunting Zhang, Yao Long, Xiaocheng Gong, Zhe Yang, Yanan Zhang, Peining Chen, Xuemei Sun*, **Huisheng Peng**, Bingjie Wang*, "Ivy-Inspired Design of Polymer Gel Electrolytes for Fiber Lithium-Ion Batteries with High Stability", ***Advanced Materials***, 2026, 38.

434 Zihao Zhou, Yuanyuan Zheng, Yichi Zhang, Yutao Lu, Peiyu Liu, Jingxia Wu, Bingjie Wang*, Jiajun Qin*, **Huisheng Peng**, Peining Chen*, "Large-Area Writable Textile Display via Parallel-Aligned Electroluminescent Fibers and Field-Activated Dielectric Inks", ***Advanced Functional Materials***, 2026, 36.

433 Sijia Yu, Xinheng Yan, Chenglong Wang, Weirong Cao, Yunsong Su, Ziwei Liu, Jiajia Wang, Yiqing Yang, Sihui Yu, Hongyu Jiang, Wenjun Li, Pengzhou Li, Hongji Sun, Songlin Zhang, Ting Liu*, **Huisheng Peng**, Xuemei Sun*, "A Non-invasive, Closed-Loop Electronic Stent for Real-Time Management of Gastroesophageal Reflux Disease", ***Advanced Fiber Materials***, 2026, 8, 289-302.

432 Kun Zhang, You Pan, Xingyu Guo, Jifeng Wang, Chuanfa Li, Jiaxin Li, Meng Liao, Yi Jiang, Wenjun Li, Kailin Zhang, Qian Ye, Longmei Ma, Xiaocheng Gong, Kai Li, Ying Wang, Yue Gao, Xin-Gao Gong, **Huisheng Peng**, Bingjie Wang*, "Connecting adjacent active layers with structural pillars for high-performance Li-organic batteries", ***Escience***, 2025, 5, 100401.

431 **Huisheng Peng***, "Beyond fiber electronics", ***National Science Review***, 2025, 12, nwaf393.

430 Yutao Lu*, Yuanyuan Zheng, Yichi Zhang, Zihao Zhou, Jingxia Wu, **Huisheng Peng**, Peining Chen, "High-Performance TPU@AgNWs Transparent Conductive Fiber for Textile Displays", ***Acta Chimica Sinica***, 2025, 83, 1142-1149.

429 Siwei Cao, Li Yong, Jiuzhou Liu, Longmei Ma, Zhe Yang, Yichi Zhang, Jiamin Chen, Haoran Xu, Yedong Qin, Wenjing Zhao, Qingquan Han, Jiahe Qu, Jiatian Song, Peining Chen, Zhengfeng Zhu*, **Huisheng Peng***, "Axial Channel for Gel Electrolyte to Produce Efficient Fiber Dye-Sensitized Solar Cell", ***Advanced Functional Materials***, 2026, 36.

428 Ke Chen, Yue Liu, Xiaokun Wang, Peiyu Liu, Chuyue Lei, Yuanyuan Zheng, Duo Li,

Jingxia Wu, Bingjie Wang, Xuemei Sun, Peining Chen*, **Huisheng Peng**, "A Full-Color Textile Display with 122% sRGB Gamut by Designing Three-Primary-Color Interwoven Pixels", ***Advanced Optical Materials***, 2025, 13.

427 Wenjun Li, Jianyou Feng, Haoyu Zhang, Chengqiang Tang, Jinyan Li, Ziwei Liu, Yiqing Yang, Jiajia Wang, Kun Zhang, Songlin Zhang, **Huisheng Peng**, Xuemei Sun*, "Co-Extrusion Strategy for Continuously Fabricating Flexible Fiber Electrochemical Sensors with High Stability and Consistency", ***Advanced Functional Materials***, 2026, 36, 8.

426 Chengqiang Tang, Sihui Yu, Wenjun Li, Tao Huang, Yiqing Yang, Songlin Zhang, **Huisheng Peng**, Xuemei Sun*, "Design, construction, and application of implantable fiber biosensors", ***Advanced Materials***, 2026, 38, 2508190.

425 Kaiwen Zeng*, Jizeng Liu, Zhijing Wu, Yedong Qin, Jiayi Shen, Fuyao Huang, **Huisheng Peng*** , "A material viewpoint on metal-backboned polymers", ***Advanced Materials***, 2026, 38, 2509064.

424 Hongyu Jiang, Hongji Sun, Songlin Zhang*, Peining Chen*, **Huisheng Peng**, "Lightweight and high-performance carbon nanotube fabrics for electromagnetic interference shielding", ***Science China-Materials***, 2025, 68, 2071-2078.

423 Shuo Wang, Yan Wang, Zhaofeng Ouyang, Shitao Geng, Qianyun Chen, Xiaoju Zhao, Bin Yuan, Xiao Zhang, Shanshan Tang, Qiuchen Xu, Peining Chen, **Huisheng Peng***, Hao Sun*, "Molecular engineering of two-dimensional polyamide interphase layers for anode-free lithium metal batteries", ***Nature Materials,*** 2025, 24, s41563-025-02339-y.

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421 Yingfan Chang, Haibo Jiang, Yichi Zhang, Shiqi Sun, Xiaocheng Gong, Chenhao Lu, Chen Zhao*, Songlin Zhang, Peining Chen, **Huisheng Peng**, Bingjie Wang*, "Integrated helical fiber electrode for stable Ah-level fast-charging fiber lithium-ion batteries", ***Small***, 2025, 21, 2506922.

420 Ziyang Kang, Shengfei Wang, Guanbin Wu, Shu Chen, Zilong Zheng, Wenwen Wang, Xinwei Du, Huajing Li, Mengyao Zhu, **Huisheng Peng**, Yue Gao*, "Nitrogen-centered organic salts enable stable lithium-ion supply for high-energy-density batteries", ***Journal of the American Chemical Society***, 2025, 147, 30591-30598.

419 Wenjun Li, Jianyou Feng, Haoyu Zhang, Chengqiang Tang, Jinyan Li, Ziwei Liu, Yiqing Yang, Jiajia Wang, Kun Zhang, Songlin Zhang, **Huisheng Peng**, Xuemei Sun*, "Co-extrusion strategy for continuously fabricating flexible fiber electrochemical sensors with high stability and consistency", ***Advanced Functional Materials***, 2025, 35, 2510120.

418 Yi Jiang, Yao Long, Xiangran Cheng, Haibo Jiang, Chuanfa Li, Meng Liao, Xuemei Sun, Peining Chen, Chen Zhao, **Huisheng Peng**, Bingjie Wang*, "Ah-level large-format fiber-shaped lithium-ion batteries enabled by effective field homogenization", ***Advanced Materials***, 2025, 37, 2506218.

417 Yifeng Zhang, Kaiwen Zeng, Yanruzhen Wu, Fuyao Huang, **Huisheng Peng***,"Synthesis of nickel-backboned polymers by incorporating triazine groups", ***Science Bulletin***, 2025, 70, 2223-2227.

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Materials Research Societies International Conference for Young Researchers, Haikou, China.

62 **Huisheng Peng**, "*Wearable fiber-shaped energy devices*", October 2014, *China Textile Academic Conference*, Shanghai.

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57 **Huisheng Peng**, *"Functionalization and applications of aligned carbon nanotube/polymer materials*", September 2013, *Suzhou Institute of Nanotechnology, Chinese Academy of Sciences*, Suzhou.

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46 **Huisheng Peng**, "*Aligned carbon nanotube/polymer materials for electronic applications*", October 2012, *International Conference on Emerging Advanced Materials*, Brisbane, Australia.

45 **Huisheng Peng**, "*Novel responsive polymer materials incorporated with aligned carbon nanotubes*", September 2012, *The 1st Polymer Chemistry International Symposium*, Shanghai, China.

44 **Huisheng Peng**, "*Organic optoelectronic materials and devices based on aligned carbon*

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35 **Huisheng Peng**, "*Functional materials for biomedical applications*", April 2011, *China and Finland Workshop on Biomanufacturing and Evaluation Techniques*, Tianjin, China.

34 **Huisheng Peng**, "*Hierarchical assembly to prepare functional materials*", April 2010, *East China University of Science and Technology*, Shanghai.

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31 **Huisheng Peng**, "*Highly aligned carbon nanotube composites*", April 2010, *Spring Materials Research Society Meeting*, San Francisco, USA.

30 **Huisheng Peng**, "*Highly aligned carbon nanotube/polymer composites*", March 2009, *International Conference on Advanced Fibers and Polymer Materials*, Shanghai, China.

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28 **Huisheng Peng**, "*Chromatic polydiacetylene nanocomposites*", September 2009, *Sino-French Bilateral Seminar on Macromolecular and Molecular Science*, Shanghai, China.

27 **Huisheng Peng**, "*Novel carbon nanotube/polymer composite nanomaterials*", August 2008, *The 236th American Chemical Society National Meeting*, Philadelphia, PA.

26 **Huisheng Peng**, "*Polymer nanocomposites containing aligned carbon nanotubes*", November 2007, *Fall American Chemical Institute of Chemical Engineers National Meeting*, Salt Lake City, Utah.

25 **Huisheng Peng**, "*Chromatic carbon nanotube fibers*", November 2007, *Fall Materials*

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24 **Huisheng Peng**, "*Organic core-shell nanoobjects by living anionic polymerization*", March 2007, *The 233rd American Chemical Society National Meeting*, Chicago, IL.

23 **Huisheng Peng**, "Supramolecular assembly in common organic solvent from block copolymer and organic acid", 2007, *The 233rd American Chemical Society National Meeting*, Chicago, IL.

22 **Huisheng Peng**, Yunfeng Lu, "*Responsive polydiacetylene/silica nanocomposites*", November 2006, *Fall American Institute of Chemical Engineers National Meeting*, San Francisco, CA.

21 **Huisheng Peng**, Yunfeng Lu, "*Hierarchical assemblies from bridged perylenediimide silsesquioxane building molecules*", November 2006, *Fall American Institute of Chemical Engineers National Meeting*, San Francisco, CA.

20 **Huisheng Peng**, Yunfeng Lu, "*Responsive nanocomposites through hierarchical assembly*", November 2006, *Fall American Institute of Chemical Engineers National Meeting*, San Francisco, CA.

19 **Huisheng Peng**, Yunfeng Lu, "Self-assembly of organic semiconductor molecules: experiments, molecular modeling and simulation", November 2006, *Fall American Institute of Chemical Engineers National Meeting*, San Francisco, CA.

18 **Huisheng Peng**, Yunfeng Lu, "Experimental and theoretical study of light-responsive polydiacetylene nanocomposites", November 2006, *Fall American Institute of Chemical Engineers National Meeting*, San Francisco, CA.

17 **Huisheng Peng**, Yunfeng Lu, "*Self-assembly of homopolymer/small organic building molecules in the common solvent*", September 2006, *The 232nd American Chemical Society National Meeting*, San Francisco, CA.

16 **Huisheng Peng**, Jing Tang, Yunfeng Lu, "*Chromatically responsive ordered mesoporous materials*", August 2006, *The 5th International Mesostructured Materials Symposium (IMMS 2006)*, Shanghai, China.

15 **Huisheng Peng**, Yunfeng Lu, "*Polydiacetylene/silica nanocomposites with tunable mesostructure and thermochromatism from diacetylenic assembling molecules*", March 2006, *The 231st American Chemical Society National Meeting*, Atlanta, GA.

14 **Huisheng Peng**, Yunfeng Lu, "*pH-responsive self-assembly of homopolymers and the applications as drug delivery*", August 2005, *The 230 American Chemical Society National Meeting*, Washington, DC.

13 **Huisheng Peng**, Yunfeng Lu, "*Supramolecular self-assembly with tunable morphologies*", August 2005, *The 230 American Chemical Society National Meeting*, Washington, DC.

12 **Huisheng Peng**, Yunfeng Lu, "*Temperature-responsive supramolecular assembly*", August 2005, *The 230th American Chemical Society National Meeting*, Washington, DC.

11 **Huisheng Peng**, Yunfeng Lu, "*Self-assembly of Formic acid/PS-b-P4VP complexes into vesicles in their common solvent chloroform*", March 2005, *The 229th American Chemical Society National Meeting*, San Diego, CA.

10 **Huisheng Peng**, Yunfeng Lu, "*Crystallization induced self-assembly of perfluorooctanoic acid/ PS-b-P4VP in the common solvent*", March 2005, *The 229th American Chemical Society National Meeting*, San Diego, CA.

9 **Huisheng Peng**, Yunfeng Lu, "*Functional conjugated nanocomposites through assembly of silica and conjugated oligomers*", March 2005, *Spring Materials Research Society Meeting*, San Francisco, CA.

8 **Huisheng Peng**, Yunfeng Lu, "Responsive supramolecular particles from assemblies of homopolymers", March 2005, *Spring Materials Research Society Meeting*, San Francisco, CA.

7 **Huisheng Peng**, Yunfeng Lu, "*Supramolecular assembly of thermo-sensitive hierarchical hollow spheres*", March 2005, *Spring Materials Research Society Meeting*, San Francisco, CA.

6 **Huisheng Peng**, Yunfeng Lu, "*Thermo-sensitive self-labeled hierarchical polymeric hollow spheres by supramolecular assembly*", January 2005, *The 5th Louisiana Conference on Advance Materials and Emerging Technologies*, New Orleans, LA.

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