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个人简介：本人当前是西安交通大学电气工程学院副教授，博士生导师，并入选陕西百人（省千）和三秦学者。我毕业美国耶鲁大学获得博士学位，之后在麻省理工学院开展博士后研究工作。我于 2015 年加入西安交通大学电气工程学院开展新能源，电力系统和能源互联网方面的研究工作。期间，本人先后在美国西北大学做访问学者，之后在北京计算科学研究中心，麻省理工学院和澳大利亚阿德莱德大学作为访问教授并开展新能源和 AI 算法方面的研究合作。先后担任自然科学基金项目评审人和陕西省科技奖励评审专家。当前已经发表理论算法和新能源材料相关论文 22 篇。我的研究包括四个方向： 1. 研究电力复杂网络高阶结构及对称性对电网鲁棒性和同步稳定性的影响； 2. 发展基于边缘计算的工况流数据分类算法和故障预测分析（Predictive Analytics）； 3. 发展基于电池传感器流数据和人工智能的电池电荷状态及剩余寿命预测算法以及故障预测分析；4. 发展纳米光子超材料的反向设计算法和工程应用，尤其是基于 AI 人工智能的超级透镜（Metalens）大规模结构设计算法方面的研究。

教育经历

- Ph.D., *Yale University, New Haven, CT,* *2003-2008*
- M.S., *University of British Columbia (UBC), Vancouver, BC,* *2000-2003*
- 本科，*强化班, 南京大学* *1995-1999*

工作经历

- **副教授，电气工程学院，西安交通大学** *2015-至今*
- **访问教授，***MIT, Cambridge, MA* *2020*
- **访问教授，***Adelaide University, Adelaide, South Australia* *2020*
- **访问教授，北京计算科学研究中心，北京** *2017*
- **访问学者，***Northwestern University, Evanston，IL* *2015*
- **Research Affiliate**, *MIT, Cambridge, MA* *2012-2014*
- **Postdoctoral Fellow**, *Center for Excitonics, Research Lab of Electronics (RLE), MIT, Cambridge, MA* *2018-2011*

科研项目和奖励

1. 陕西省百人计划（省千）
2. 三秦学者
3. 自然科学基金面上项目：金属表面近场下共振能量转移理论和计算方法的研究。
4. 国家电网华东分部横向项目：电网调度运行智能化发展路径和典型场景研究报告

论文和专利

1. Motif Difference Field: An Effective Image-based Time Series Classification and Applications in Machine Malfunction Detection, Yadong Zhang, Fuhang Gan, and Xin Chen*, in Proceeding of the 4th IEEE Conference on Energy Internet and Energy System Integration, 2020
2. Cascading Failures and Interplay of Layer Fragmentation and Compatibility in Assortative Cyber-Physical Power Systems, Liu Hao, Xin Chen*, Long Huo, and Chunming Niu, Reliability Engineering and System Safety (under review)
3. Triadic Motif Field of Time Series and Classification and Interpretation of Electrocardiogram Signals with Feature Transfer Learning, Yadong Zhang and Xin Chen*, IEEE Transactions on Biomedical Engineering (Submitted)
4. Kernel-based Audio Signal Dereverberation and Spatially Independent Time Series Classification with Deep Learning, IEEE Transactions on Industrial Electronics, Yun Wang, Xin Meng, Yu Zhao, Yadong Zhang, Xin Chen* (Submitted)
5. Modulation of Evanescent Near Fields of Nanophotonic Multilayered Thin Films and Tuning Forster Resonance Energy Transfer, Changhao Meng, Xin Chen*, Meng Zhang，Guanghao Lu，Zhenghua An, Physical Chemistry Chemical Physics (under review)
6. Förster Resonant Energy Transfer Mediated by the Evanescent Fields of Nanophotonic Particles, Changhao Meng, Xin Chen*, Zhenghua An, J. Phys. Chem. C, 123, 29900-29907(2019)
7. Correlations between Performance of Organic Solar Cells and Film‐Depth‐Dependent Optical and Electronic Variations, Zihao Wang, Yupeng Hu, Tong Xiao, Yuanwei Zhu, Xin Chen*, Laju Bu, Yajie Zhang, Zhixiang Wei, Ben Bin Xu, Guanghao Lu, Advanced Optical Materials, 7 1900152 (2019)
8. Classification of MAOX phases and semiconductor screening for next-generation energy conversion ceramic materials, Zhenyu Wang, Xin Chen*, and Chunming Niu, J. Mater. Chem. C, 7, 6895-6899 (2019)
9. Charge-redistribution-induced new active sites on (0 0 1) facets of α-Mn2O3 for significantly enhanced selective catalytic reduction of NOx by NH3, Zhaoyang Fan, Zhenyu Wang, Jian-Wen, Shi, Chen Gao, Ge Gao, Baorui Wang, Yao Wang, Xin Chen, Chi He and Chunming Niu，Journal of Catalysis 370, 30-37, (2019)
10. Formation mechanism of rectangular-ambulatory-plane TiO 2 plates: an insight into the role

of hydrofluoric acid, Yajun Zou, Ge Gao, Zhenyu Wang, Jian-Wen Shi, Hongkang Wang, Dandan Ma, Zhaoyang Fan, Xin Chen, Zeyan Wang and Chunming Niu , Chemical Communications 54 (52), 7191-7194, (2018) IF: 6.16

11. Layered Hexagonal Oxycarbides, Mn+1AO2Xn (M=Sc, Y, La, Cr and Mo, A=Ca, X=C): Unexpected Photovoltaic Ceramics, Zhenyu Wang, Xin Chen*, Chunming Niu, Journal of Physical Chemistry C, 122, 14240 (2018)

12. TiC MXene High-energy Density Cathode for Lithium-air Battery, Zhenyu Wang, Xin Chen*, Fei Shen, Xiaogang Hang and Chunming Niu, Advanced Theory and Simulations, 1, 1800059 (2018)

13. Resonant energy transfer under the influence of the evanescent field from the metal, Amrit Poudel, Xin Chen*, and Mark A. Ratner*, The Journal of Chemical Physics 146, 244115 (2017)

14. Enhancement of Resonance Energy Transfer Due to Evanescent-wave from the Metal, A. Poudel, X. Chen*. M. A. Ratner, J. Phys. Chem. Lett., 7, 955 – 960 (2016)

15. Film-depth-dependent Light Absorption and Charge Transport for Polymer Electronics: A Case Study on Semiconductor/Insulator Blends by Plasma Etching, Shuang Gao, Weichen Wang, Laju Bu, Ling Zhou, Xin Chen, Demei Yu, Shengtao Li, Guanghao, Lu, Advanced Electronic Materials, 2, 1600359 (2016)

16. The Journal of Physical Chemistry C, Zhenyu Wang, Xin Chen, Yonghong Cheng and Chunming Niu, "Adsorption and Deposition of Li2O2 on the Pristine and Oxidized TiC Surface by First-principles Calculation", 119, 25684 (2015)

17. "Defect chemistry and lithium transport in Li3OCl anti-perovskite superionic conductor", Ziheng Lu, Chi Chen, Zarah Medina Baiyee, Xin Chen, Chunming Niu and Francesco Ciucci, Physical Chemistry Chemical Physics, 17, 32547 (2015)

18. Xin Chen*, The rigorous stochastic matrix multiplication scheme for the calculations of reduced equilibrium density matrices of open multilevel quantum systems, J. Chem. Phys., 140, 154101 (2014)

19. Xin Chen*, Jianshu Cao, and Robert J. Silbey. "A Novel Construction of Complex-valued Gaussian Processes with Arbitrary Spectral Density and its Application to Excitation Energy Transfer" J. Chem. Phys. 138, 224104 (2013)

20. Xin Chen and Robert J. Silbey. "Excitation Energy Transfer in Non-Markovian Dynamical Disordered Environment: Localization, Narrowing and Transfer Efficiency" J. Phys. Chem. B 115, 5499 (2012)

21. Xin Chen and Robert J. Silbey. "Effect of Correlation of Local Fluctuations on Exciton Coherence" J. Chem. Phys. 132, 204503 (2010)

22. Xin Chen and Victor Batista. "The MP/SOFT Methodology for Simulations of Non-adiabatic Quantum Dynamics: Application to the Photo-isomerization of the Retinyl Chromophore in Rhodopsin" Photochem. Photobiol. 190, 274 (2007).

23. Xin Chen and Victor Batista. "Matching Pursuit Split Operator Fourier Transform Simulations of Non-adiabatic Excited State Quantum Dynamics in Pyrazine" J. Chem. Phys. 125, 124313 (2006)

24. Xin Chen and Victor Batista. "Matching Pursuit/ Split Operator Fourier Transform Computations of Thermal Correlation Functions" J. Chem. Phys. 122, 64102 (2005)

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26. Xin Chen and Mark Thachuk. “Ground and First-Excited Global Potential Energy Surfaces of H2O+-He Complex: Predictions of Ion Motilities” Int. J. of Quantum Chem. 101, 1 (2005)

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专利：一种基于流数据的锂电池寿命预测方法，申请号：202010797577.5