

XINGLIN WEN

PERSONAL PARTICULARS:

Associate Professor

Division of Electro-Optical Engineering,

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EDUCATION & RESEARCH EXPERIENCE:

2007.09-2011.06 *B.S.* in applied physics, Wuhan University, Supervisor: Prof. Guoping Wang

2011.08-2015.08 *Ph.D.* in applied physics, Nanyang Technological University

Supervisor: Prof. Qihua Xiong

2016.04-2018.12 *Postdoctor*, Nanyang Technological University

Supervisor: Prof. Qihua Xiong

2018.12-present *Associate professor*, Huazhong University of Science and Technology

RESEARCH INTERESTS:

1. Surface plasmon: localized surface plasmon resonance, metamaterials
2. Surface plasmon/semiconductor coupling system: charge transfer at interface, modulation of emission and nonlinearity
3. Nonlinear and ultrafast optics of nanomaterials

HONORS & AWARDS:

Chinese Government Award for Outstanding Self-financed Students Abroad, 2014

3rd International Conference on 2D Materials and Technology, Best Poster, 2017

PUBLICATIONS:

1. **X.L. Wen**, W.G. Xu, W.J. Zhao, J.B. Khurgin and Q.H. Xiong*. "Plasmonic Hot Carriers-Controlled Second Harmonic Generation in WSe₂ Bilayers". *Nano Letters*. 18, 1686-1692 (2018)
2. **Q. Zhang**+, **X.L. Wen**+, G. Y. Li, Q. F. Ruan, J. F. Wang and Q.H. Xiong*. "Multiple Magnetic Mode-Based Fano Resonance in Split-Ring Resonator/Disk Nanocavities". *ACS Nano*. 7, 11071-11078 (2013) (+co-first author)
3. **X.L. Wen**, G.Y. Li, C.Y. Gu, J.X. Zhao, S.J. Wang, C.P. Jiang*, S. Palomba*, M. D. Sterke and Q.H. Xiong*. "Doubly Enhanced Second Harmonic Generation through Structural and Epsilon-near-Zero Resonances in TiN Nanostructures". *ACS Photonics*, 5, 2087-2093 (2018)
4. **X.L. Wen**, G.Y. Li, J. Zhang, Q. Zhang, B. Peng, L.M. Wong, S.J. Wang* and Q.H. Xiong*. "Transparent free-standing metamaterials and their applications in surface-enhanced Raman scattering". *Nanoscale*, 6, 132-139 (2014)

5. **X.L. Wen**, Q. Zhang, J.W. Chai, L.M. Wong, S.J. Wang and Q.H. Xiong*. “Near-infrared active metamaterials and their applications in tunable surface-enhanced Raman scattering”. *Optics Express*, 22, 2989-2995 (2014)
6. **X.L. Wen** and Q.H. Xiong*, “A large scale perfect absorber and optical switch based on phase change material ($\text{Ge}_2\text{Sb}_2\text{Te}_5$) thin film”. *Science China Materials*, 3, 165-172 (2016)
7. C. Cao, J. Zhang, **X.L. Wen**, S.L. Dodson, N.T. Dao, L.M. Wong, S.J. Wang, S. Li, A. T. Phan and Q.H. Xiong* “Metamaterials -Based Label-Free Nanosensor for Conformation and Affinity Biosensing”. *ACS Nano*, 7, 7583-7591 (2013)
8. Y.J. Ke, **X.L. Wen**, D.Y. Zhao, R.C. Che, Q.H. Xiong and Y. Long*. “Controllable Fabrication of Two-Dimensional Patterned VO_2 Nanoparticle, Nanodome, and Nanonet Arrays with Tunable Temperature-Dependent Localized Surface Plasmon Resonance”. *ACS Nano*, 11, 7542-7551 (2017)
9. X.F. Liu, Q. Zhang, W.K. Chong, J.N. Yip, **X.L. Wen**, Z.P. Li, F.X. Wei, G.N. Yu, Q.H. Xiong* and T.C. Sum*. “Cooperative Enhancement of Second-Harmonic Generation from a Single CdS Nanobelt-Hybrid Plasmonic Structure”. *ACS Nano*, 9, 5018-5026 (2015)
10. Y. Zhao, M. de la Mata, R. L. Qiu, J. Zhang, **X.L. Wen**, C. Magen, X. P. Gao, J. Arbiol and Q.H. Xiong*. “Te-seeded growth of few-quintuple layer Bi_2Te_3 nanoplates”. *Nano Research*, 7, 1243-1253 (2014)
11. L.L. Zhang, Y.W. Yuan, **X.L. Wen**, Y. Li, C. Cao* and Q.H. Xiong*. “A coordination and ligand replacement based three-input colorimetric logic gate sensing platform for melamine, mercury ions, and cysteine”. *RSC Advances*. 5, 59106-59113 (2015)
12. J.X. Fang*, J. Li, C.F. Tian, Q.Q. Gao, X.J. Wang, N.Y. Gao, **X.L. Wen**, C.S. Ma, H.J. You, Q.H. Xu, Q.H. Xiong and Z.Y. Li. “Gold nanorings synthesized via a stress-driven collapse and etching mechanism”. *NPG Asia Materials*, 8, e323 (2016).
13. P. Chen, N.T. Tran, **X.L. Wen**, Q.H. Xiong and B. Liedberg*. “Inflection Point of the Localized Surface Plasmon Resonance Peak: A General Method to Improve the Sensitivity”. *ACS Sensors*, 2, 235-242 (2017)
14. W.W. Liu, J. Xing, J.X. Zhao, **X.L. Wen**, K. Wang, P.X. Lu* and Q.H. Xiong*. “Giant Two-Photon Absorption and Its Saturation in 2D Organic-Inorganic Perovskite” *Advanced Optical Materials*, 5, 1601045 (2017)
15. L.L. Zhang, J. Xing, **X.L. Wen**, J.W. Chai, S.J. Wang and Q.H. Xiong*. “Plasmonic heating from indium nanoparticles on a floating microporous membrane for enhanced solar seawater desalination”. *Nanoscale*, 9, 12843-12849 (2017)
16. G.K. Long, C.Y. Jiang, R. Sabatini, Z.Y. Yang, M. Y. Wei, L.N. Quan, Q.M. Liang, A. Rasmita, M. Askerka, G. Walters, X.W. Gong, J. Xing, **X.L. Wen**, R. Q. Bermudez, H.F. Yuan, G.C. Xing, X. R. Wang, D.T. Song, O. Voznyy, M.T. Zhang, S. Hoogland, W.B. Gao*, Q.H. Xiong* and E.H. Sargent* “Spin control in reduced-dimensional chiral perovskites” *Nature Photonics* 12, 528–533 (2018)