



Department: School of Chemistry & Molecular Engineering

Professional field: Chemistry; Materials

E-mail: wlz@ecust.edu.cn

Profile

Prof. Lingzhi Wang got her PhD from East China University of Science and Technology (ECUST) in 2007. Her research is mainly related to the design and fabrication of porous semiconductor for photocatalysis and SERS application. She has published over 90 papers with a total Citation over 2700.

Research Field

Photocatalysis; SERS

Research results and selected published papers

As first or corresponding author

1. S. Q. Wu, X. J. Tan, J. Y. Lei, H. J. Chen, L. Z. Wang,* J. L. Zhang* Ga-Doped and Pt-Loaded Porous TiO₂-SiO₂ for Photocatalytic Nonoxidative Coupling of Methane J. Am. Chem. Soc., 2019, 141, 6592-6600.
2. D. Y. Qi, L. J. Lu, L. Z. Wang,* J. L. Zhang* Improved SERS Sensitivity on Plasmon-Free TiO₂ Photonic Microarray by Enhancing Light-Matter Coupling, J. Am. Chem. Soc., 2014, 136, 9886-9889.
3. D. L. Lu, J. Y. Lei, L. Z. Wang,* J. L. Zhang* Multifluorescently traceable nanoparticle by a single-wavelength excitation with color-related drug release performance, J. Am. Chem. Soc., 2012, 134, 8746-8749.
4. J. Y. Lei, L. Z. Wang,* J. L. Zhang* Superbright multifluorescent core-Shell mesoporous nanospheres as trackable transport carrier for drug. ACS Nano, 2011, 2, 3447-3455. (Highlighted by Nature Asia)
5. D. Du, W. Shi, L. Z. Wang,* J. L. Zhang*, Yolk-Shell Structured Fe₃O₄@void@TiO₂ as a Photo-Fenton-Like Catalyst for the Extremely Efficient Elimination of Tetracycline, Appl.Catal.B: Environ, 2017, 200, 484-492.
6. W. Shi, D. Du, B. Shen, C. Cui, L. Lu, L. Z. Wang,* J. L. Zhang*, Synthesis of Yolk-Shell Structured Fe₃O₄@void@CdS Nanoparticles: A General and Effective Structure Design for Photo-Fenton Reaction, ACS Appl. Mater. Interfaces, 2016, 8, 32, 20831-20838
7. L. Yang, C. Cui, L. Z. Wang,* J. Y. Lei, J. L. Zhang*, Dual-Shell Fluorescent Nanoparticles for Self-Monitoring of pH-Responsive Molecule-Releasing in a Visualized Way, ACS Appl. Mater. Interfaces, 2016, 8, 29, 19084-19091.
8. L. G. Yang, L. Z. Wang,* C. F. Cui, J. Y. Lei, J. L. Zhang* Stöber Strategy to Multifluorescent Organosilica Nanocrystal, Chem. Commun., 2016, 52, 6154-6157.
9. X. Tan, L. Z. Wang,* C. Cheng, X. F. Yan, B. Shen, J. L. Zhang* Plasmonic MoO₃-x@ MoO₃ nanosheets for highly sensitive SERS detection through nanoshell-isolated electromagnetic enhancement, Chem. Commun., 2016, 52, 2893-2896. (Back Cover)
10. D. Y. Qi, X. F. Yan, L. Z. Wang,* J. L. Zhang* Plasmon-free SERS self-monitoring of catalysis reaction on Au nanoclusters/TiO₂ photonic microarray, Chem. Commun., 2015, 51, 8813-8816.
11. J. Y. Lei, L. Z. Wang,* J. L. Zhang* Ratiometric pH sensor based on mesoporous silica nanoparticles and Förster resonance energy transfer, Chem.Commun., 2010, 8445-8447.
12. L. Jiang, L. Z. Wang,* J. L. Zhang* A Direct Route For the Synthesis of Nanometer-Sized Bi₂WO₆ Particles Loaded on a Spherical MCM-48 Mesoporous Molecular Sieve, Chem. Commun., 2010, 8067-8069.
13. L. Z. Wang, J. Y. Lei, J. L. Zhang* Building of multifluorescent mesoporous silica nanoparticles, Chem. Commun., 2009, 2195-2197.
14. L. Z. Wang, C. Cheng, T. Sen, J. Y. Lei, J. L. Zhang,* F. Zhang, Carbon dots modified mesoporous organosilica as an adsorbent for the removal of 2, 4-dichlorophenol and heavy metal ions, J. Mater. Chem. A, 2015, 3, 13357-13364. (Highly Cited Paper)
11. X. F. Yan, L. Z. Wang,* X. J. Tan, J. L. Zhang* Surface-Enhanced Raman Spectroscopy Assisted by Radical Capturer for Tracking of Plasmon-Driven Redox Reaction, Sci. Rep. 2016, 6, 30193.
12. W. Shi, D. Du, B. Shen, C. F. Cui, L. J. Lu, L. Z. Wang,* J. L. Zhang* Synthesis of Yolk-Shell Structured Fe₃O₄@void@CdS Nanoparticles: A General and Effective Structure Design for Photo-Fenton Reaction, ACS, Appl. Mater. Inter. DOI: 10.1021/acsami.6b07644
13. D. Du, W. Shi, L. Z. Wang,* Jinlong Zhang* Yolk-Shell Structured Fe₃O₄@void@TiO₂ as a Photo-Fenton-Like Catalyst for the Extremely Efficient Elimination of Tetracycline, Appl. Catal. B. 2017, 200, 484-492.
14. L. G. Yang, L. Z. Wang,* M. Y. Xing, J. L. Zhang* Silica nanocrystal/graphene composite with improved photoelectric and photocatalytic performance, Appl. Catal. B, 2016, 180, 106-112.
16. L. J. Lu, F. Teng, T. Sen, D. Y. Qi, L. Z. Wang,* J. L. Zhang* Synthesis of visible-light driven CrxOy-TiO₂ binary photocatalyst based on hierarchical macro-mesoporous silica, Appl. Catal. B, 2015, 163, 9-15.
17. D. Y. Qi, L. J. Lu, Z. H. Xi, L. Z. Wang,* J. L. Zhang*, Enhanced photocatalytic performance of TiO₂ based on synergistic effect of Ti³⁺ self-doping and slow light effect, Appl. Catal. B, 2014, 160, 621-628.
18. C. Cheng, X. J. Tan, D. L. Lu, L. Z. Wang, T. Sen, J. Y. Lei, A. M. El-Toni, J. L. Zhang, F. Zhang, D. Y. Zhao Carbon-Dot-Sensitized, Nitrogen-Doped TiO₂ in Mesoporous Silica for Water Decontamination through Nonhydrophobic Enrichment-Degradation Mode, Chem. Eur. J. 2015, 21, 17944-17950.
19. J. Y. Lei, L. G. Yang, D. L. Lu, X. F. Yan, C. Cheng, Y. D. Liu, L. Z. Wang,* J. L. Zhang, Carbon Dot-Incorporated PMO Nanoparticles as Versatile Platforms for the Design of Ratiometric Sensors, Multichannel Traceable Drug Delivery Vehicles, and Efficient Photocatalysts, Adv. Opt. Mater., 2015, 3, 57-63.
20. Lin, D. Y. Qi, H. Ding, L. Z. Wang,* M. Y. Xing, J. L. Zhang* Carbon-Doped Titanium Dioxide Nanocrystals for Highly Efficient Dye-Sensitized Solar cells, Cat. Today DOI:10.1016/j.cattod.2016.06.033.
21. L. Z. Wang, L. Jiang, C. C. Xu, J. L. Zhang* Influence of Cr-MCM-48 and Cr-KIT-6 matrixes synthesized in alkaline and acidic conditions to the visible-light driven photocatalytic performance of loaded TiO₂, J. Phys. Chem. C., 2012, 116, 16454-16460.
22. L. Z. Wang, Y. L. Liu, F. Chen, J. L. Zhang*, M. Anpo Fluoride-induced reduction of CTAB template amount for the formation of MCM-48 mesoporous molecular sieve, J. Phys. Chem. C., 2007, 111, 13648-13651.
23. L. Z. Wang, Y. L. Liu, F. Chen, J. L. Zhang and Masakazu Anpo Manipulating energy transfer process between rhodamine 6G and rhodamine B in different mesoporous hosts. J. Phys. Chem. C., 2007, 111, 5541-5548.