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| **Subject** | 　Optics | **Research Interest** | Diamond, Optoelectronics, Semiconductor |
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| **Research Projects** | 1. Solar-blind photodetectors fabricated from diamond
2. Wide bandgap semiconductor materials and devices
3. ZnO nanoparticles and applications
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| **Selected Publications** | 1. M. M. Jiang, G. H. He, H. Y. Chen, Z. Z. Zhang, L. X. Zheng, **C. X. Shan**\*, D. Z. Shen\*, X. S. Fang\*, Wavelength-tunable electroluminescenct light sources from individual Ga-doped ZnO microwires, ***Small*** 1604034 (2017).
2. X. Yang, **L Dong\***, **C. X. Shan**\*, J. L. Sun, N. Zhang, S. P. Wang, M. M. Jiang, B. H. Li, X. H. Xie, D. Z. Shen\*, Piezo-Phototronic Effect Enhanced Electrically Pumped Lasing, **Adv. Mater.** 29, 1602832 (2017).
3. Z. F. Shi, Y. Li, Y. T. Zhang\*, Y. S. Chen, X. J. Li\*, D. Wu, T. T. Xu, **C. X. Shan**\*, G. T. Du, High-Efficiency and Air-Stable Perovskite Quantum Dots Light-Emitting Diodes with an All-Inorganic Heterostructure, ***Nano Lett.*** 17(1), 313- 321 (2017).
4. R. Zhou, Q. Zhao\*, K. K. Liu, Y. J. Lu, L. Dong, **C. X. Shan**\*, Europium-decorated ZnO quantum dots as a fluorescent sensor for the detection of an anthrax biomarker, ***J. Mater. Chem. C*** 5, 1685 (2017).
5. K. K. Liu, **C. X. Shan**\*, H. Z. Liu, Q. Lou, D. Z. Shen\*, Fluorescence of ZnO/carbon mixture and application in acid rain detection, ***RSC Adv.*** 7, 1841 (2017).
6. K. K. Liu, **C. X. Shan**\*, G. H. He, R. Q. Wang, L. Dong, D. Z. Shen\*, Rewritable Painting Realized from Ambient-Sensitive Fluorescence of ZnO Nanoparticles, ***Sci. Rep.*** 7, 42232 (2017).
7. G. H. He, M. M. Jiang\*, L. Dong, Z. Z. Zhang, B. H. Li, **C. X. Shan**\*, D. Z. Shen\*, Near-infrared light-emitting devices from individual heavily Ga-doped ZnO microwires, ***J. Mater. Chem. C*** 5, 2542 (2017).
8. Y. J. Lu, Z. F. Shi, **C. X. Shan**\*, D. Z. Shen, ZnO-based deep-ultraviolet light-emitting devices, ***Chin. Phys. B*** 26(4), 047703 (2017).
9. G. H. He, H. Zhou, H. Shen, Y. J. Lu, H. Q. Wang, J. C. Zheng, B. H. Li, **C. X. Shan**\*, D. Z. Shen, Photodetectors for weak-signal detection fabricated from ZnO:(Li,N) films, ***Appl. Surf. Sci.*** 412, 554- 558 (2017).
10. L. X. Su, Q. Lou\*, J. H. Zang, **C. X. Shan**\*, Y. F. Gao, Temperature-dependent fluorescence in nanodiamonds, ***Appl. Phys. Express*** 10(2), 025102 (2017).
11. K. C. Liu, Z. Y. Zhang, **C. X. Shan**, Z. Q. Feng, J. S. Liu, C. L. Song, Y. N. Bao, X. H. Qi, B. Dong\*, A flexible and superhydrophobic upconversion-luminescence membrane as an ultrasensitive fluorescence sensor for single droplet detection, ***Light: Sci. Appl.*** 5, e16136 (2016).
12. Q. H. Zeng, D. Shao, X. He, Z. Y. Ren, W. Y. Ji, **C. X. Shan**\*, S. N. Qu, J. Li\*, L. Chen, Q. Li\*, Carbon dots as a trackable drug delivery carrier for localized cancer therapy in vivo, ***J. Mater. Chem. B*** 4, 5119- 5126 (2016).
13. X. Yang, **C. X. Shan**,\* Y. J. Lu, X. H. Xie, B. H. Li, S. P. Wang, M. M. Jiang, D. Z. Shen, Transparent ultraviolet photovoltaic cells, ***Opt. Lett.*** 41(4), 685- 688 (2016).
14. N. Zhang, **C. X. Shan**\*, H. Q. Tan, Q. Zhao, S. P. Wang, Z. C. Sun, Y. D. Xia, D. Z. Shen, Black-colored ZnO nanowires with enhanced photocatalytic hydrogen evolution, ***Nanotechnology*** 27, 22LT01 (2016).
15. L. X. Su, Q. Lou\*, Z. Jiao, C. X. Shan\*, Plant Cell Imaging Based on Nanodiamonds with Excitation-Dependent Fluorescence, Nanoscale Research Lett. 11, 425 (2016).
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