

Professor Wang Sui-Dong

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Academic Qualification:

- Ph.D. in Physics and Materials Science, City University of Hong Kong, 2004
- B.Sc. in Physics, Zhejiang University, 2000

Teaching Area

- Semiconductor Device Physics

Research Area

Device development and device physics in organic/hybrid electronics, such as organic/hybrid neuromorphic devices toward artificial intelligence; organic/hybrid memristors, memcapacitors and memtransistors.

Working Experience

- Professor, MIMSE, Macau University of Science and Technology, Macau, China, 2021 - present
- Professor, FUNSOM, Soochow University, China, 2008 - Present
- Research Scientist, National Institute of Advanced Industrial Science and Technology (AIST), Japan, 2008
- Research Scientist, National Institute of Physical and Chemical Research (RIKEN), Japan, 2007
- Postdoctoral Fellow, Nagoya University, Japan, 2004 - 2007

Academic Publication (selected)

- M. T. Tan, T. Wang, X. Gao, Y. N. Zhong, J. Y. Zhang, J. L. Xu, C. Li, **S. D. Wang**, "Egg-white based polymer memristors with competing electronic-ionic effect and timescale dependent current modulation", *IEEE Electron Device Letters* 42: 228-231 (2021).

- Y. N. Zhong, X. Gao, J. L. Xu, H. Sirringhaus, **S. D. Wang**, “Selective UV-gating organic memtransistors with modulable levels of synaptic plasticity”, *Advanced Electronic Materials* 6: 1900955 (2020).
- T. Chen, X. Gao, J. Y. Zhang, J. L. Xu, **S. D. Wang**, “Ultrasensitive ZnO nanowire photodetectors with a polymer electret interlayer for minimizing dark current”, *Advanced Optical Materials* 8: 1901289 (2020).
- J. Y. Zhang, J. L. Xu, T. Chen, X. Gao, **S. D. Wang**, “Toward broadband imaging: Surface-engineered PbS quantum dot/perovskite composite integrated ultrasensitive photodetectors”, *ACS Applied Materials & Interfaces* 11: 44430-44437 (2019).
- L. X. Zhang, X. Gao, J. J. Lv, Y. N. Zhong, C. Xu, J. L. Xu, **S. D. Wang**, “Filter-free selective light monitoring by organic field-effect transistor memories with a tunable blend charge-trapping layer”, *ACS Applied Materials & Interfaces* 11: 40366-40371 (2019).
- J. J. Lv, X. Gao, L. X. Zhang, Y. Feng, J. L. Xu, J. Xiao, B. Dong, **S. D. Wang**, “Visible-blind UV monitoring with a photochromic charge trapping layer in organic field-effect transistors”, *Applied Physics Letters* 115: 113302 (2019).
- Y. Feng, X. Gao, Y. N. Zhong, J. L. Wu, J. L. Xu, **S. D. Wang**, “Solution-processed polymer thin-film memristors with an electrochromic feature and frequency-dependent synaptic plasticity”, *Advanced Intelligent Systems* 1: 1900022 (2019).
- J. L. Xu, Y. H. Liu, X. Gao, S. Shen, **S. D. Wang**, “Toward wearable electronics: A lightweight all-solid-state supercapacitor with outstanding transparency, foldability and breathability”, *Energy Storage Materials* 22: 402-409 (2019).
- J. W. Cai, L. X. Li, C. Xu, Y. Feng, Y. N. Zhong, J. L. Xu, X. Gao, **S. D. Wang**, “Organic thin film memcapacitors”, *Applied Physics Letters* 114: 043302 (2019).
- Y. N. Zhong, T. Wang, X. Gao, J. L. Xu, **S. D. Wang**, “Synapse-like organic thin film memristors”, *Advanced Functional Materials* 28: 1800854 (2018).

Professional Society Membership

- IEEE Member