



Graphical Abstracts/Chin Chem Lett 29 (2018) iii-vii

Editorial

Supercapacitors

Chinese Chemical Letters 29 (2018) 551

Zhiqiang Shi^a, Zhong-Shuai Wu^b, Zhiqiang Niu^c, Jinping Liu^d, Xiaowei Yang^e, Wei Lv^f^a Tianjin Polytechnic University, Tianjin 300387, China^b Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian 116023, China^c Nankai University, Tianjin 300071, China^d Wuhan University of Technology, Wuhan 430070, China^e Tongji University, Shanghai 201804, China^f Graduate School at Shenzhen, Tsinghua University, Shenzhen 518055, China

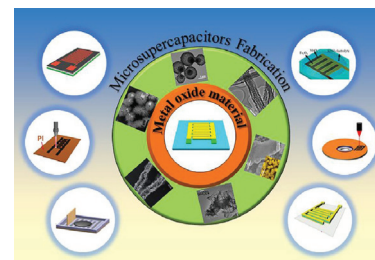
Reviews

Recent progress and perspectives of metal oxides based on-chip microsupercapacitors

Chinese Chemical Letters 29 (2018) 553

Tingting Huang^{a,b}, Kai Jiang^c, Di Chen^a, Guozhen Shen^b^a College of Physics and Mathematics and Beijing Key Laboratory for Magneto-Photoelectrical Composite and Interface Science, University of Science and Technology Beijing, Beijing 100083, China^b State Key Laboratory for Superlattices and Microstructures, Institute of Semiconductors, Chinese Academy of Sciences, Beijing 100083, China^c Institute & Hospital of Hepatobiliary Surgery, Key Laboratory of Digital Hepatobiliary Surgery of Chinese PLA, Chinese PLA Medical School, Chinese PLA General Hospital, Beijing 100853, China

Recent progress on metal oxide nanostructures based on-chip microsupercapacitors was summarized.

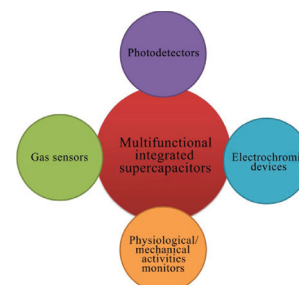


Recent progress of unconventional and multifunctional integrated supercapacitors

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Mengxue Chen^b, Yun Yang^b, Dezhi Chen^a, Hua Wang^b^a Key Laboratory of Jiangxi Province for Persistent Pollutants Control and Resources Recycle, Nanchang Hangkong University, Nanchang 330063, China^b School of Chemistry, Beihang University, Beijing 100191, China

We summary the latest works of multifunctional integrated supercapacitors which were combined with photodetectors, gas sensors, electrochromic or physiological/mechanical activities monitors.



Flexible supercapacitors based on carbon nanotubes

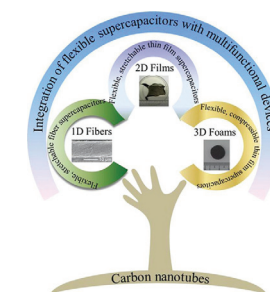
Lili Liu^a, Zhiqiang Niu^b, Jun Chen^b

^a Tianjin Key Laboratory for Photoelectric Materials and Devices, National Demonstration Center for Experimental Function Materials Education, School of Materials Science and Engineering, Tianjin University of Technology, Tianjin 300384, China

^b Key Laboratory of Advanced Energy Materials Chemistry (Ministry of Education), College of Chemistry, Nankai University, Tianjin 300071, China

This review provides an overview of recent progress towards the development of flexible supercapacitors based on macroscopic carbon nanotubes-based electrodes, including one-dimensional (1D) fibers, 2D films, and 3D foams, with a focus on electrode preparation and configuration design as well as their integration with other multifunctional devices.

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Communications

Simplified fabrication of high areal capacitance all-solid-state micro-supercapacitors based on graphene and MnO₂ nanosheets

Jieqiong Qin^{a,c}, Zhong-Shuai Wu^a, Feng Zhou^a, Yanfeng Dong^a, Han Xiao^a, Shuanghao Zheng^{a,b,c}, Sen Wang^{a,c}, Xiaoyu Shi^{a,b,d}, Haibo Huang^a, Chenglin Sun^a, Xinhe Bao^{a,b}

^a Dalian National Laboratory for Clean Energy, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian 116023, China

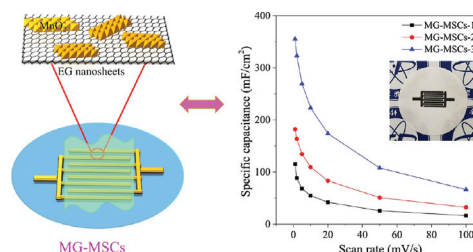
^b State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian 116023, China

^c University of Chinese Academy of Sciences, Beijing 100049, China

^d Department of Chemical Physics, University of Science and Technology of China, Hefei 230026, China

A universal simplified strategy was developed to fabricate all-solid-state planar micro-supercapacitors with high areal capacitance (~355 mF/cm²), based on interdigital patterned films of 2D pseudocapacitive MnO₂ nanosheets and electrochemically exfoliated graphene.

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Paper-based all-solid-state flexible asymmetric micro-supercapacitors fabricated by a simple pencil drawing methodology

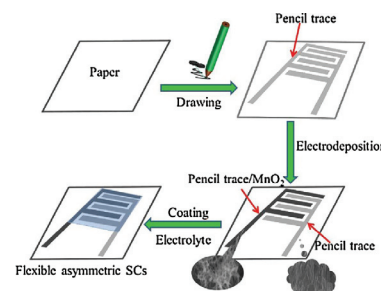
Lanqian Yao^a, Tao Cheng^a, Xiaoqin Shen^a, Yizhou Zhang^a, Wenyong Lai^a, Wei Huang^{a,b}

^a Key Laboratory for Organic Electronics and Information Displays (KLOEID), Institute of Advanced Materials (IAM), Jiangsu National Synergetic Innovation Center for Advanced Materials (SICAM), Nanjing University of Posts & Telecommunications, Nanjing 210023, China

^b Shaanxi Institute of Flexible Electronics (SIFE), Northwestern Polytechnical University (NPU), Xi'an 710072, China

A simple and novel methodology was developed for manufacturing interdigitated asymmetric all-solid-state flexible micro-supercapacitors (MSCs) by a facile pencil drawing process followed by electrodeposition of MnO₂ on one of the as-drawn graphite electrode as anode and the other as cathode.

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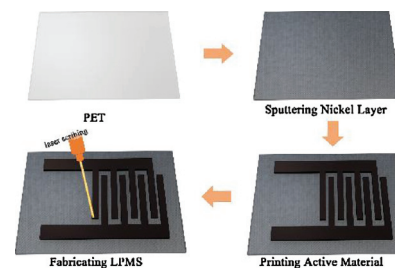
Laser processed micro-supercapacitors based on carbon nanotubes/manganese dioxide nanosheets composite with excellent electrochemical performance and aesthetic property

Lu Shi, Yang Wang, Peichao Zou, Xuanyu Wang, Dang Wu, Ronghe Wang, Cheng Yang

Division of Energy and Environment, Graduate School at Shenzhen, Tsinghua University, Shenzhen 518055, China

A laser processed micro-supercapacitor (LPMS) based on carbon nanotubes/manganese dioxide composite is fabricated through slurry dispensing and laser scribing techniques. This device presents superior electrochemical performance and aesthetic property.

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