

## 中央财政科研项目研究成果信息公开（一）

截止：2017年6月

序号	项目编号	项目名称	项目研究成果信息
1	2016YFA0201802	新型纳米存储器模型和表征	<p>1、Jixuan Wu, et al., "A study on W vacancy defect in Mono-layer transition-Metal Dichalcogenide (TMD) TFETs through systematic Ab initio calculations", VLSI Satellite Conference (SNW) 2017.</p> <p>2、Jiezhi Chen, "On the Reliability in 3D NAND Flash Memories", invited talk, IWRMN-EDHE 2017.</p> <p>3、Jiezhi Chen, "Random Telegraph Signal Noise in Si MOSFETs and High-k MISFETs", invited talk, IUMRS-ICA 2016.</p> <p>4、Nianduan Lu, et al., "A review for compact model of graphene field-effect transistors", Chin. Phys. B, 26(3), 036804 (2017).</p> <p>5、Wei Wei, et al., "Simulation of doping effect for HfO<sub>2</sub>-based RRAM based on first-principles calculations", Accepted, SISPAD 2017.</p>
2	2016YFA0301204	微腔调控的新型太赫兹量子器件	<p>1、Thermally Evaporated SiO Serving as Gate Dielectric in Graphene Field-Effect Transistors, Letao Yang, Hanbin Wang, Xijian Zhang*, Yuxiang Li, Xiufang Chen, Xiangang Xu, Xian Zhao*, and Aimin Song*, IEEE Transactions on Electron Devices, 2017, 64, 1846-1850.</p> <p>2、A novel thermally evaporated etching mask for low-damage dry etchin, Hanbin Wang, Yiming Wang, Gengchang Zhu, Qingpu Wang, Qian Xin, Lin Han*, and Aimin Song*, IEEE Transactions on Nanotechnology, 2017, 16, 290-295.</p> <p>3、Dirac node lines in two-dimensional Lieb lattices, Bo Yang, Xiaoming Zhang and Mingwen Zhao*, Nanoscale, 2017, accepted.</p> <p>4、Cu<sub>3</sub>N and its analogs: a new class of electrodes for lithium ion batteries, Junru Wang, Feng Li, Xiaobiao Liu, Hongcai Zhou, Xiaofei Shao, Yuanyuan Qu and Mingwen Zhao*, J. Mater. Chem. A, 2017, 5, 8762.</p> <p>5、Extremely Sensitive Dependence of SnO<sub>x</sub> Film Properties on Sputtering Power, Yunpeng Li, Qian Xin*, Lulu Du, Yunxiu Qu, He Li, Xi Kong, Qingpu Wang, and Aimin Song*, Scientific Reports, 2016, 6, 36183.</p> <p>6、A Sputtered Silicon Oxide Electrolyte for High-Performance Thin-Film Transistors, Xiaochen Ma, Jiawei Zhang, Wensi Cai, Hanbin Wang, Joshua Wilson, Qingpu Wang, Qian Xin*, and Aimin Song*, Scientific Reports, 2017, 7, 809.</p> <p>7、Reversible control of the magnetization of Fe<sub>3</sub>O<sub>4</sub> via lithium ions, Guodong Wei, Lin Wei, Dong Wang, Yufeng Tian, Yanxue Chen, Shishen Yan, Liangmo Mei and Jun Jiao, RSC Adv., 2017, 7, 2644.</p> <p>8、Effects of substrate and anode metal annealing on InGaZnO Schottky diodes, Lulu Du, He Li, Linlong Yan, Jiawei Zhang, Qian Xin*, Qingpu Wang, and Aimin Song*, Applied Physics Letter, 2017, 110, 011602.</p>

序号	项目编号	项目名称	项目研究成果信息
			<p>9、 Reversible control of magnetization of Fe<sub>3</sub>O<sub>4</sub> by a solid-state film lithium battery, Guodong Wei, Lin Wei, Dong Wang, Yanxue Chen, Yufeng Tian, Shishen Yan, Liangmo Mei, and Jun Jiao, Appl. Phys. Lett., 110, 062404 (2017).</p> <p>10、 Magnetic coupling and electric transport in Nb, Fe co-doped rutile TiO<sub>2</sub> epitaxial films, Guodong Wei, Lin Wei, Yanxue Chen, Shishen Yan, Yufeng Tian, Liangmo Mei, Jun Jiao, Journal of Alloys and Compounds, 695 (2017) 2261-2265.</p> <p>11、 High Performance Complementary Circuits Based on p-SnO and n-IGZO Thin-Film Transistors, Jiawei Zhang, Jia Yang, Yunpeng Li, Joshua Wilson, Xiaochen Ma, Qian Xin*, and Aimin Song*, Materials, 2017, 10, 319.</p> <p>12、 High performance self-powered photodetectors based on ZnS/ZnO nanorod arrays, Hailing Lin, Lin Wei, Cuncun Wu, Yanxue Chen, Shishen Yan, Liangmo Mei and Jun Jiao, Nanoscale Research Letters, (2016) 11:420.</p> <p>13、 Influence of sputtering conditions on room-temperature fabricated InGaZnO-based Schottky diodes, Qian Xin*, Linlong Yan, Lulu Du, Jiawei Zhang, Yi Luo, Qingpu Wang, and Aimin Song*, Thin Solid Films, 2016, 616, 569-572.</p> <p>14、 Raman spectroscopic characterization of stacking configuration and interlayer coupling of twisted multilayer graphene grown by chemical vapor deposition, Jiang-Bin Wu, Huan Wang, Xiao-Li Li, Hailin Peng, Ping-Heng Tan*, Carbon, 2016,110, 225-231.</p> <p>15、 Layer-Number Dependent Optical Properties of 2D Materials and Their Application for Thickness Determination, Xiao-Li Li, Wen-Peng Han, Jiang-Bin Wu, Xiao-Fen Qiao, Jun Zhang, and Ping-Heng Tan*, Advanced Functional Materials, 2017, 1604468.</p> <p>16、 Confined Acoustic Phonons in Colloidal Nanorod Heterostructures Investigated by Nonresonant Raman Spectroscopy and Finite Elements Simulations, Mario Miscuglio, Miao-Ling Lin, Francesco Di Stasio, Ping-Heng Tan*, and Roman Krahne*, Nano Letters, 2016, 16, 7664-7670.</p> <p>17、 Near Full-Composition-Range High-Quality GaAs<sub>1-x</sub>Sb<sub>x</sub> Nanowires Grown by Molecular-Beam Epitaxy, Lixia Li, Dong Pan*, Yongzhou Xue, Xiaolei Wang, Miaoling Lin, Dan Su, Qinglin Zhang, Xuezhe Yu, Hyok So, Dahai Wei, Baoquan Sun, Pingheng Tan, Anlian Pan, and Jianhua Zhao*, Nano Letters, 2017, 17, 622-63</p>
3	2016YFA0601103	关键区域海洋碳库变动对全球变化的响应特征与机理	<p>1、 Xin Y, Liu H, Cui F, Liu H, XunLuying*. 2016. Recombinant Escherichia coli with sulfide: Quinone oxidoreductase and persulfide dioxygenase rapidly oxidizes sulfide to sulfite and thiosulfate via a new pathway. Environ Microbiol. 18:5123-5136.</p> <p>2、 Huanjie Li, Juan Li, Chuanjuan Lü, Yongzhen Xia, Yufeng Xin, Honglei Liu, LuyingXun*, and Huaiwei Liu*. 2017. FisR activates <math>\sigma</math><sup>54</sup>-dependent transcription of sulfide-oxidizing genes in Cupriaviduspinatubonensis JMP134. MolMicrobiol. doi:</p>

序号	项目编号	项目名称	项目研究成果信息
			<p>10.1111/mmi.13725. [Epub ahead of print].</p> <p>3、 Yongzhen Xia, Chuanjuan Lü, NingkeHou, Yufeng Xin, Jihua Liu, Honglei Liu*, and LuyingXun*. 2017. Sulfide production and oxidation by heterotrophic bacteria under aerobic conditions. ISME J. Accepted for publication.</p> <p>4、 Xu Y, Liu J*, Zheng Q, et al. Genome sequence of <i>Salegentibactersalarius</i> KCTC 12974, isolated from a marine solar saltern of the Yellow Sea in South Korea[J]. Genome Announcements, 2016, 4(6): e01308-16.</p> <p>5、 Zhang, W. Z., Wang, H., Chai, F., &amp; Qiu, G. (2016). Physical drivers of chlorophyll variability in the open South China Sea. Journal of Geophysical Research: Oceans, 121(9), 7123-7140.</p>
4	2016YFB0701002	新波段激光晶体的研制	<p>1、 Yuxia Zhang, Haohai Yu, Rui Zhang, Gang Zhao, Huaijin Zhang, Yanxue Chen, Liangmo Mei, Mauro Tonelli, and Jiyang Wang, Broadband atomic-layer MoS<sub>2</sub> optical modulators for ultrafast pulse generations in the visible range, Optics Letters, 42(3)( 2017):547-550</p>
5	2016YFB1102201	高质量大尺寸倍半氧化物激光晶体生长技术	<p>1、 Wenxiang Mu, Zhitai Jia, Yanru Yin, Qiangqiang Hu, Yang Li, Baiyi Wu, Jian Zhang, Xutang Tao, "High quality crystal growth and anisotropic physical characterization of <math>\beta</math>-Ga<sub>2</sub>O<sub>3</sub> single crystals grown by EFG method." Journal of Alloys and Compounds 714 (2017): 453-458.</p> <p>2、 Yutong Liu, Mengqi Zhang, Yang Liu, Mei Xue, Bo Li, Xutang Tao, "Novel Li<sub>3</sub>VO<sub>4</sub>/MoS<sub>2</sub> composite materials with high electrochemical performance as anode for lithium ion batteries." Materials Letters 196 (2017): 209-212.</p> <p>3、 Hongwang Xia, Ming Li, Tao Li, Shengzhi Zhao, Guiqiu Li, and Kejian Yang, "Few-layered MoS<sub>2</sub> as a saturable absorber for a passively Q-switched Er: YAG laser at 1.6 <math>\mu</math>m." Applied Optics 56.10 (2017): 2766-2770.</p> <p>4、 Qiangqiang Hu, Zhitai Jia, Azzurra Volpi, Stefano Veronesi, Mauro Tonelli and Xutang Tao, "Crystal growth and spectral broadening of a promising Yb: CaLu<sub>x</sub>Gd<sub>1-x</sub>AlO<sub>4</sub> disordered crystal for ultrafast laser application." CrystEngComm 19.12 (2017): 1643-1647.</p> <p>5、 A. Diebold, Z. Jia, I. J. Graumann, Y. Yin, F. Emaury, C. J. Saraceno, X. Tao, and U. Keller, "High-power Yb: GGG thin-disk laser oscillator: first demonstration and power-scaling prospects." Optics Express 25.2 (2017): 1452-1462.</p> <p>6、 Mingqi Fan, Tao Li, Guiqiu Li, Houyi Ma, Shengzhi Zhao, Kejian Yang, and Christian Kränkel, "Graphitic C<sub>3</sub>N<sub>4</sub> as a new saturable absorber for the mid-infrared spectral range." Optics letters 42.2 (2017): 286-289.</p>

序号	项目编号	项目名称	项目研究成果信息
			<p>7、Guangfeng Liu, Jie Liu, Xin Ye, Lina Nie, Peiyang Gu, Xutang Tao, Qichun Zhang, "Self-Healing Behavior in a Thermo-Mechanically Responsive Cocrystal during a Reversible Phase Transition." <i>Angewandte Chemie International Edition</i> 56.1 (2017): 198-202.</p> <p>8、Wenxiang Mu, Yanru Yin, Zhitai Jia, Lijuan Wang, Jie Sun, Mengxia Wang, Cheng Tang, Qiangqiang Hu, Zeliang Gao, Jian Zhang, Na Lin, Stefano Veronesi, Zhengping Wang, Xian Zhao and Xutang Tao, "An extended application of <math>\beta</math>-Ga<sub>2</sub>O<sub>3</sub> single crystals to the laser field: Cr<sup>4+</sup>: <math>\beta</math>-Ga<sub>2</sub>O<sub>3</sub> utilized as a new promising saturable absorber." <i>RSC Advances</i> 7.35 (2017): 21815-21819.</p>
6	2016YFC0200503	基于高山站和飞机航测的立体探测技术	<p>1、Xue Yang, Likun Xue*, Lan Yao, Qinyi Li, Liang Wen, Yanhong Zhu, Tianshu Chen, Xinfeng Wang, Lingxiao Yang, Tao Wang, Shuncheng Lee, Jianmin Chen, Wenxing Wang, Carbonyl compounds at Mount Tai in the North China Plain: Characteristics, sources, and effects on ozone formation, <i>Atmospheric Research</i>, 2017, 196: 53-61.</p> <p>2、Ruidong Wu, Xuehua Zhou*, Linpeng Wang, Zhe Wang, Yang Zhou, Jingzhu Zhang and Wenxing Wang, PM<sub>2.5</sub> Characteristics in Qingdao and across coastal cities in China, <i>Atmosphere</i>, 2017, 8(4): 77.</p> <p>3、Xinfeng Wang, Rongrong Gu, Liwei Wang, Wenxue Xu, Yating Zhang, Bing Chen, Weijun Li, Likun Xue, Jianmin Chen, Wenxing Wang*, Emissions of fine particulate nitrated phenols from the burning of five common types of biomass, <i>Environmental Pollution</i>, 2017, accepted.</p>
7	2016YFC0301402	AUV 智慧型复合材料壳体设计与加工	<p>1、张敏, 朱礼斌, 朱波, 李洪俊, 杨先辉. 碳纤维表面处理研究现状[J]. <i>高科技纤维与应用</i>, 2017, 42(2).</p> <p>2、崔晓晨, 于美杰, 王成国, 毛琼. 电纺 PAN 纳米纤维的 AFM 形貌及晶区分布研究[J]. <i>功能材料</i>, 2016, 47(6): 86-92.</p> <p>3、虞军伟, 朱波, 乔琨, 井敏, 曹伟伟. 四官能团环氧/聚酯型环氧改性环氧体系的性能研究[J]. <i>高科技纤维与应用</i>, 2016, 41(5): 38-40.</p> <p>4、于丽媛, 朱波. 活性碳纤维表面加载催化剂工艺研究[J]. <i>高科技纤维与应用</i>, 2016, 41(5): 53-56.</p> <p>5、袁晓敏, 朱波, 蔡珣, 乔琨, 虞军伟. 自乳化环氧上浆剂对碳纤维复合材料性能影响[J]. <i>高科技纤维与应用</i>, 2016, 41(5): 32-37.</p> <p>6、Gao B, Zhang R, He M, et al. Effect of a multiscale reinforcement by carbon fiber surface treatment with graphene oxide/carbon nanotubes on the mechanical properties of reinforced carbon/carbon composites[J]. <i>Composites Part A Applied Science &amp; Manufacturing</i>, 2016, 90:433-440.</p> <p>7、Yuan X, Zhu B, Cai X, et al. Optimization of interfacial properties of carbon fiber/epoxy composites via a modified polyacrylate emulsion sizing[J]. <i>Applied Surface Science</i>, 2017, 401.</p>

序号	项目编号	项目名称	项目研究成果信息
			<p>8、Gao B, Zhang R, Wang C. Enhanced mechanical properties of carbon fiber composites by grafting different structural poly(amido amine) onto fiber surface[J]. Polymer Testing, 2016, 56:192-199.</p> <p>9、Fan W, Wang Y, Wang C, et al. High efficient preparation of carbon nanotube-grafted carbon fibers with the improved tensile strength[J]. Applied Surface Science, 2016, 364(2):539-551.</p> <p>10、Fan W, Wang Y, Wang C, et al. High efficient preparation of carbon nanotube-grafted carbon fibers with the improved tensile strength[J]. Applied Surface Science, 2016, 364(2):539-551.</p> <p>11、Niu F X, Wang Y X, Ma L R, et al. Synthesis and characterization of nano-scale and submicro-scale silicon carbide whiskers on C/C composites[J]. Journal of Alloys &amp; Compounds, 2017.</p> <p>12、Hu X, Wang C, Tang X, et al. Fibrillar structure development of polyacrylonitrile fibers treated by ultrasonic etching in oxidative stabilization[J]. Polymers for Advanced Technologies, 2017.</p> <p>13、Niu F X, Wang Y X, Abbas I, et al. A MoSi<sub>2</sub>-SiOC-Si<sub>3</sub>N<sub>4</sub>/SiC anti-oxidation coating for C/C composites prepared at relatively low temperature[J]. Ceramics International, 2016.</p> <p>14、Xie B, Hong L, Chen P, et al. Effect of sulfonation with concentrated sulfuric acid on the composition and carbonizability of LLDPE fibers[J]. Polymer Bulletin, 2016, 73(3):891-908.</p> <p>15、Cui X, Yu M, Wang C, et al. The morphology and crystalline region distribution of polyacrylonitrile nanofibers prepared by electrospinning[J]. Polymer Science, 2016, 58(3):357-367.</p> <p>16、Yuan X, Zhu B, Cai X, et al. Improved interfacial adhesion in carbon fiber/epoxy composites through a waterborne epoxy resin sizing agent[J]. Journal of Applied Polymer Science, 2017, 134.</p> <p>17、Yuan X, Zhu B, Cai X, et al. Effects of particle size and distribution of the sizing agent on carbon fiber/epoxy composites interfacial adhesion[J]. Polymer Composites.</p>
8	2016YFC0801604	地下矿山采空区致灾机理及超前探测与安全高效处理技术	<p>1、张连震, 张庆松, 刘人太, 等. 考虑浆液黏度时空变化的速凝浆液渗透注浆扩散机制研究[J]. 岩土力学, 2017, 38(2): 443-452.</p> <p>2、刘人太, 张连震, 张庆松, 等. 速凝浆液裂隙动水注浆扩散规律模拟试验[J]. 土木工程学报, 2017, 50(1): 82-83.</p>

序号	项目编号	项目名称	项目研究成果信息
9	2016YFC1000202	基于辅助生殖队列的不孕不育人群遗传因素研究	<p>1、Gu Y, Bian Y, Xu X, Wang X, Zuo C, Meng J, Li H, Zhao S, Ning Y, Cao Y, Huang T, Yan J, Chen ZJ. Downregulation of miR-29a/b/c in placenta accreta inhibits apoptosis of implantation site intermediate trophoblast cells by targeting MCL1. <i>Placenta</i>. 2016 Dec;48:13-19.</p> <p>2、Zhang Q, Li G, Zhang L, Sun X, Zhang D, Lu J, Ma J, Yan J, Chen ZJ. Maternal common variant rs2305957 spanning PLK4 is associated with blastocyst formation and early recurrent miscarriage. <i>Fertil Steril</i>. 2017 Apr;107(4):1034-1040.</p> <p>3、Ni T, Li J, Chen H, Gao Y, Gao X, Yan J, Chen ZJ. Male chromosomal polymorphisms reduce cumulative live birth rate for IVF couples. <i>J Assist Reprod Genet</i>. 2017 Jun 1.</p>