TRS Project "Smart Solar Energy Harvesting, Storage and Utilization" (T23-407/13-N)
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	No.	Inter-institutional collaborations are denoted with #	Year of publications	Author(s) (corresponding author are denoted with an asterisk*)	Title and iournal/book
Subtopic 1: High Performance Vacuum Deposited Thin Film PV Cells and Modules					
ST1	1	#	2016	Pei Cheng, Cenqi Yan, Tsz-Ki Lau, Jiangquan Mai, Xinhui Lu* & Xiaowei Zhan*	Molecular lock: A versatile key to enhance efficiency and stability of organic solar cells. Adv. Mat, 28(28): 5822 - 9. DOI: 10.1002/adma.201600426
ST1	2	#	2017	Pei Cheng, Mingyu Zhang, Tsz-Ki Lau, Yao Wu, Boyu Jia, Jiayu Wang, Cenqi Yan, Meng Qin, Xinhui Lu & Xiaowei Zhan*	Realizing small energy loss of 0.55 eV, high open-circuit voltage > 1 V and high efficiency > 10% in fullerene-free polymer solar cells via energy driver. Adv. Mat, 29(11): 1605216. DOI: 10.1002/adma.201605216
ST1	3	#	2016	Ye Feng, Tszki Lau, Guanming Cheng, Ling Yin, Zhaohui Li, Hailin Luo, Zhuang Liu, Xinhui Lu*, Chunlei Yang* & Xudong Xiao*	A low-temperature formation path toward highly efficient Se-free Cu2ZnSnS4 solar cells fabricated through sputtering and sulfurization. CrystEngComm, 18: 1070-7. DOI: 10.1039/C5CE02279G
ST1	4	#	2015	Qiang Huang, Zi Yeb & Xudong Xiao*	Recent progress in photocathodes for hydrogen evolution. Journal of Materials Chemistry A, 3: 15824-37. DOI: 10.1039/c5ta03594e
ST1	5	#	2017	Boyu Jia, Yao Wu, Fuwen Zhao, Cenqi Yan, Siya Zhu, Pei Cheng, Jiangquan Mai, Tsz-Ki Lau, Xinhui Lu, Chun-Jen Su, Chunru Wang & Xiaowei Zhan*	Rhodanine flanked indacenodithiophene as non-fullerene acceptor for efficient polymer solar cells. Science China-Chemistry, 60(2): 257 - 263. DOI: 10.1007/s11426-016-0336-6
ST1	6	#	2016	Shuixing Li, Wenqing Liu, Chang-Zhi Li, Tsz-Ki Lau, Xinhui Lu, Minmin Shi* & Hongzheng Chen*	A non-fullerene acceptor with a fully fused backbone for efficient polymer solar cells with a high open-circuit voltage. J of Mat Chem A, 4(39): 14983 - 7. DOI: 10.1039/c6ta07368a
ST1	7	#	2016	Shuixing Li, Wenqing Liu, Minmin Shi*, Jiangquan Mai, Tsz-Ki Lau, Junhua Wan, Xinhui Lu, Chang-Zhi Li* & Hongzheng Chen*	A spirobifluorene and diketopyrrolopyrrole moieties based non-fullerene acceptor for efficient and thermally stable polymer solar cells with high open-circuit voltage. Energy & Environmental Science, 9: 604-10. DOI: 10.1039/c5ee03481g
ST1	8	#	2017	Wenjie Li, Yaping Ma*, Shihang Yang, Junbo Gong, Shengbai Zhang & Xudong Xiao*	Nanoscopic study of the compositions, structures, and electronic properties of grain boundaries in Cu(InGa)Se-2 photovoltaic thin films. Nano Energy, 33: 157 - 67. DOI: 10.1016/j.nanoen.2017.01.041

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	No.	Inter-institutional collaborations are denoted with #	Year of publications	Author(s) (corresponding author are denoted with an asterisk*)	Title and iournal/book
ST1	9	#	2015	Xinhui Lu*, Htay Hlaing, Chang-Yong Nam, Kevin G Yager, Charles T Black & Benjamin M Ocko*	Molecular orientation and performance of nanoimprinted polymer-based blend thin film solar cells. Chemistry of Materials, 27(1): 60-66. DOI: 10.1021/cm502950j
ST1	10	#	2016	Jiangquan Mai, Tsz-Ki Lau, Jun Li, Shih-Hao Peng, Chain-Shu Hsu, U-Ser Jeng, Jianrong Zeng, Ni Zhao, Xudong Xiao & Xinhui Lu*	Understanding morphology compatibility for high-performance ternary organic solar cells. Chem of Mat, 28(17): 6186 - 95. DOI: 10.1021/acs.chemmater.6b02264
ST1	11	#	2017	Jiangquan Mai, Haipeng Lu, Tsz-Ki Lau, Shih-Hao Peng, Chain-Shu Hsu, Wenqiang Hua, Ni Zhao, Xudong Xiao & Xinhui Lu*	High efficiency ternary organic solar cell with morphology-compatible polymers. J of Mat Chem A, 5(23): 11739 - 45. DOI: 10.1039/c7ta00292k
ST1	12	#	2015	Jiangquan Mai, Tsz-Ki Lau, Ting Xiao, Chun-Jen Su, U-Ser Jeng, Ni Zhao, Xudong Xiao & Xinhui Lu*	Ternary morphology facilitated thick-film organic solar cell. RSC Adv.,5(107): 88500-7. DOI: 10.1039/c5ra17268c
ST1	13	#	2015	Shihang Yang, Jiakuan Zhu, Xieqiu Zhang, Xuhang Ma, Hailin Luo, Ling Yin & Xudong Xiao*	Bandgap optimization of submicron-thick Cu(In,Ga)Se-2 solar cells. Progress in Photovoltaics, 23(9): 1157-63, DOI: 10.1002/pip.2543
ST1	14	#	2014	Ling Yin, Chunlei Yang, Kang Zhang, Hailin Luo, Xieqiu Zhang, Zhuang Liu, Guangming Cheng, Zhiyu Xiong & Xudong Xiao*	Application of CVD graphene as transparent front electrode in Cu(In,Ga)Se2 solar cell. Photovoltaic Specialist Conference (PVSC), 2014 IEEE 40th , Issue Date: 8-13 June 2014.
ST1	15	#	2014	Ling Yin, Kang Zhang, Hailin Luo, Guanming Cheng, Xuhang Ma, Zhiyu Xiong & Xudong Xiao*	Highly efficient graphene-based Cu(In, Ga)Se2 solar cells with large active area. Nanoscale, 6(18): 10879-10886. DOI: 10.1039/c4nr02988g
ST1	16	#	2016	Shuhua Zhang, Lijian Zuo*, Jiehuan Chen, Zhongqiang Zhang, Jiangquan Mai, Tsz-Ki Lau, Xinhui Lu, Minmin Shi & Hongzheng Chen*	Improved photon-to-electron response of ternary blend organic solar cells with a low band gap polymer sensitizer and interfacial modification. J of Materials Chemistry A, 4(5): 1702-7. DOI: 10.1039/c5ta09727d
ST1	17	#	2016	Guohua Zhong, Kinfai Tse, Yiou Zhang, Xiaoguang Li, Li Huang, Chunlei Yang*, Junyi Zhu*, Zhi Zeng, Zhenyu Zhang & Xudong Xiao	Induced effects by the substitution of Zn in Cu(2)ZnSnXw4 (X=S and Se). Thin Solid Films, 603: 224-9. DOI: 10.1016/j.tsf.2016.02.005
ST1	18	#	2017	Jiakuan Zhu*, Tsz-Ki Lau*, Shihang Yang*, Jiangquan Mai*, Yu-Ling Lai*, Yao-Jane Hsu*, Hailin Luo*, Xinhui Lu* & Xudong Xiao*	New route for fabrication of high-quality Zn(S,O) buffer layer at high deposition temperature on Cu(In,Ga)Se-2 solar cells. IEEE J of Photovoltaics, 7(2): 651 - 655. DOI: 10.1109/JPHOTOV.2016.2636024

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Subtopic 2: Solution Processed Excitonic Solar Cells					
ST2	1	#	2015	Yang Bai, Hui Yu, Zonglong Zhu, Kui Jiang, Teng Zhang, Ni Zhao*, Shihe Yang* & He Yan*	High performance inverted structure perovskite solar cells based on a PCBM:polystyrene blend electron transport layer. J of Materials Chemistry A, 3(17): 9098-102. DOI: 10.1039/c4ta05309e
ST2	2		2016	Jie Cao, Feng Wang, Hui Yu, Yang Zhou, Haipeng Lu, Ni Zhao* & Ching-Ping Wong*	Porous PbI2 films for the fabrication of efficient, stable perovskite solar cells via sequential deposition. Journal of Materials Chemistry A, 4(26): 10223 - 30. DOI: 10.1039/c6ta03121h
ST2	3		2017	Jie Cao, Hui Yu, Shuang Zhou, Minchao Qin, Tsz-Ki Lau, Xinhui Lu, Ni Zhao* & Ching-Ping Wong*	Low-temperature solution-processed NiOx films for air-stable perovskite solar cells. Journal of Materials Chemistry A, 5(22): 11071 - 7. DOI: 10.1039/c7ta02228j
ST2	4		2015	Shuai Chang & Tao Chen*	Mesoscopic solar cell sensitization: From dye to organometal perovskite. Current Nanoscience, 11(6): 685-701, DOI: 10.2174/1573413711666150416225121
ST2	5		2014	Shuai Chang, King Young Wong, Xudong Xiao & Tao Chen*	Effective improvement of the photovoltaic performance of black dye sensitized quasi-solid-state solar cells. RSC Advances, 4(60): 31759-31763. DOI: 10.1039/C4RA04017A
ST2	6		2017	Shangshang Chen, Guangye Zhang, Jing Liu, Huatong Yao, Jianquan Zhang, Tingxuan Ma, Zhengke Li & He Yan*	An all-solution processed recombination layer with mild post-treatment enabling efficient homo-tandem non-fullerene organic solar cells. Advanced Materials, 29(6): 1604231. DOI: 10.1002/adma.201604231
ST2	7		2017	Zefeng Chen, Zhao Wang, Xinming Li*, Yuxuan Lin, Ningqi Luo, Mingzhu Long, Ni Zhao & Jian-Bin Xu*	Flexible piezoelectric-induced pressure sensors for static measurements based on nanowires/graphene heterostructures. ACS Nano, 11(5): 4507 - 13. DOI: 10.1021/acsnano.6b08027
ST2	8	#	2016	Hong-Hua Fang, Feng Wang, Sampson Adjokatse, Ni Zhao* & Maria Antonietta Loi*	Photoluminescence Enhancement in Formamidinium lead iodide thin films. Advanced Functional Materials, 26(26): 4653 - 9. DOI: 10.1002/adfm.201600715

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ST2	9		2015	Jian He, Baohua Wang, Shuai Chang & Tao Chen	Chapter 4: Ruthenium-Based Photosensitizers for Dye-Sensitized Solar Cells. Organometallics and Related Molecules for Energy Conversion, Green Chemistry and Sustainable Technology, pp 91-114. DOI 10.1007/978-3-662-46054-2_4
ST2	10	#	2017	Yikun Guo, Yunke Li, Omar Awartani, Han Han, Jingbo Zhao, Harald Ade,* He Yan* & Dahui Zhao*	Improved performance of all-polymer solar cells enabled by naphthodiperylenetetraimide-based polymer acceptor. Advanced Materials, 29: 1700309. DOI: 10.1002/adma.201700309
ST2	11	#	2016	Yikun Guo, Yunke Li, Omar Awartani, Jingbo Zhao, Han Han, Harald Ade*, Dahui Zhao* & He Yan*	A vinylene-bridged perylenediimide-based polymeric acceptor enabling efficient all-polymer solar cells processed under ambient conditions. Advanced Materials, 28(38): 8483 - 9. DOI: 10.1002/adma.201602387
ST2	12		2015	Jian He & Tao Chen*	Additive regulated crystallization and film formation of CH3NH3PbI3-xBrx for highly efficient planar-heterojunction solar cells. J of Mat Chem A, 3: 18514-20. DOI: 10.1039/c5ta05373k
ST2	13	#	2016	Jian He, Chun-Fai Ng, King Young Wong, Weifeng Liu & Tao Chen*	Photostability and moisture stability of CH3NH3PbI3-based solar cells by ethyl cellulose. Chempluschem, 81(12): 1292 - 8. DOI: 10.1002/cplu.201600415
ST2	14	#	2016	Po-Yu Ho, Chi-Ho Siu, Wai-Hong Yu, Panwang Zhou, Tao Chen*, Cheuk-Lam Ho*, Lawrence Tien Lin Lee, Ying-Hsuan Feng, Jianyong Liu, Keli Han*, Yih Hsing Lo* & Wai-Yeung Wong*	Molecular engineering of starburst triarylamine donor with selenophene containing p-linker for dye-sensitized solar cells, J of Mat Chem C, 4(4):713-26. DOI: 10.1039/c5tc03308j
ST2	15	#	2016	Huawei Hu, Kui Jiang, Joo-Hyun Kim, Guofang Yang, Zhengke Li, Tingxuan Ma, Guanghao Lu, Yongquan Qu*, Harald Ade* & He Yan*	Influence of fluorination on the properties and performance of isoindigo-quaterthiophene-based polymers. J of Materials Chemistry A, 4(14): 5039-43. DOI: 10.1039/c6ta00006a
ST2	16	#	2015	Huawei Hu, Kui Jiang, Guofang Yang; Jing Liu, Zhengke Li, Haoran Lin, Yuhang Liu, Jingbo Zhao, Jie Zhang, Fei Huang, Yongquan Qu, Wei Ma* & He Yan*	Terthiophene-based D-A polymer with an asymmetric arrangement of alkyl chains that enables efficient polymer solar cells. J of The American Chemical Society, 137(44): 14149-57. DOI: 10.1021/jacs.5b08556

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ST2	17	#	2016	Linkai Li, Feng Wang, Xiaojing Wu, Hui Yu, Shuang Zhou & Ni Zhao*	Carrier-activated polarization in organometal halide perovskites. J of Physical Chemistry C, 120(5): 2536-41. DOI: 10.1021/acs.jpcc.5b11627
ST2	18	#	2016	Zhengke Li*, Kui Jiang*, Guofang Yang*, Joshua Yuk Lin Lai, Tingxuan Ma, Jingbo Zhao, Wei Ma & He Yan	Donor polymer design enables efficient non-fullerene organic solar cells. Nature Communications, 7: 13094. DOI: 10.1038/ncomms13094
ST2	19	#	2015	Zhengke Li, Haoran Lin, Kui Jiang, Joshua Carpenter, Yunke Li, Yuhang Liu, Huawei Hu, Jingbo Zhao, Wei Ma, Harald Ade* & He Yan*	Dramatic performance enhancement for large bandgap thick-film polymer solar cells introduced by a difluorinated donor unit. Nano Energy, 15: 607-15. DOI: 10.1016/j.nanoen.2015.05.016
ST2	20	#	2016	Haoran Lin, Shangshang Chen, Huawei Hu, Lu Zhang, Tingxuan Ma, Joshua Yuk Lin Lai, Zhengke Li, Anjun Qin, Xuhui Huang, Benzhong Tang & He Yan*	Reduced intramolecular twisting improves the performance of 3D molecular acceptors in non-fullerene organic solar cells. Advanced Materials, 28(38): 8546 - 51. DOI: 10.1002/adma.201600997
ST2	21	#	2015	Haoran Lin, Shangshang Chen, Zhengke Li, Joshua Yuk Lin Lai, Guofang Yang, Terry McAfee, Kui Jiang, Yunke Li, Yuhang Liu, Huawei Hu, Jingbo Zhao, Wei Ma, Harald Ade & He Yan*	High-performance non-fullerene polymer solar cells based on a pair of donor-acceptor materials with complementary absorption properties. Advanced Materials, 27(45): 7299-304. DOI: 10.1002/adma.201502775.
ST2	22	#	2016	Jing Liu, Shangshang Chen, Deping Qian, Bhoj Gautam, Guofang Yang, Jingbo Zhao, Jonas Bergqvist, Fengling Zhang,Wei Ma, Harald Ade, Olle Inganäs, Kenan Gundogdu*, Feng Gao* & He Yan*	Fast charge separation in a non-fullerene organic solar cell with a small driving force. Nature Energy, 1, Article number: 16089. DOI: 10.1038/NENERGY.2016.89
ST2	23		2017	Yuhang Liu, Shangshang Chen, Guangye Zhang, Philip C. Y. Chow & He Yan*	A wide bandgap conjugated polymer based on a vertically connected benzodithiophene unit enabling efficient non-fullerene polymer solar cells. J of Materials Chemistry A, 5 (29):15017 – 20. DOI: 10.1039/c7ta03600k AUG 7 2017
ST2	24	#	2015	Yuhang Liu, Joshua Yuk Lin Lai, Shangshang Chen, Yunke Li, Kui Jiang, Jingbo Zhao, Zhengke Li, Huawei Hu, Tingxuan Ma, Haoran Lin, Jing Liu, Jie Zhang, Fei Huang, Demei Yu & He Yan*	Efficient non-fullerene polymer solar cells enabled by tetrahedron-shaped core based 3D-structure small-molecular electron acceptors. J of Materials Chemistry A, 3(26): 13632-6. DOI: 10.1039/c5ta03093e

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	No.	Inter-institutional collaborations are denoted with #	Year of publications	Author(s) (corresponding author are denoted with an asterisk*)	Title and iournal/book
ST2	25	#	2015	Yuhang Liu, Cheng Mu, Kui Jiang, Jingbo Zhao, Yunke Li, Lu Zhang, Zhengke Li, Joshua Yuk Lin Lai, Huawei Hu, Tingxuan Ma; Rongrong Hu, Demei Yu, Xuhui Huang, Ben Zhong Tang & He Yan*	A tetraphenylethylene core-based 3D structure small molecular acceptor enabling efficient non-fullerene organic solar cells. Advanced Materials, 27(6): 1015-20. DOI: 10.1002/adma.201404152
ST2	26	#	2014	Yuhang Liu*, Jingbo Zhao*, Zhengke Li*, Cheng Mu, Wei Ma, Huawei Hu, Kui Jiang, Haoran Lin, Harald Ade & He Yan	Aggregation and morphology control enables multiple cases of high-efficiency polymer solar cells. Nature Communications, 5: 5293. DOI: 10.1038/ncomms6293
ST2	27	#	2016	Mingzhu Long, Zefeng Chen, Tiankai Zhang, Yubin Xiao, Xiaoliang Zeng, Jian Chan, Keyou Yan* & Jianbin Xu*	Ultrathin efficient perovskite solar cells employing a periodic structure of a composite hole conductor for elevated plasmonic light harvesting and hole collection. Nanoscale, 8(12): 6290-9. DOI: 10.1039/c5nr05042a
ST2	28	#	2016	Mingzhu Long, Tiankai Zhang, Yang Chai, Chun-Fai Ng, Thomas C. W. Mak, Jianbin Xu & Keyou Yan	Nonstoichiometric acid-base reaction as reliable synthetic route to highly stable CH3NH3PbI3 perovskite film. Nature Communications, 7: 13503. DOI: 10.1038/ncomms13503
ST2	29	#	2017	Mingzhu Long*, Tiankai Zhang*, Wangying Xu, Xiaoliang Zeng, Fangyan Xie, Qiang Li, Zefeng Chen, Fengrui Zhou, Kam Sing Wong, Keyou* Yan & Jianbin Xu*	Large-grain formamidinium PbI3-xBrx for high-performance perovskite solar cells via intermediate halide exchange. Advanced Energy Materials, 7(12): 1601882. DOI: 10.1002/aenm.201601882
ST2	30	#	2017	Mingzhu Long, Tiankai Zhang, Houyu Zhu, Guixia Li, Feng Wang, Wenyue Guo, Yang Chai, Wei Chen, Qiang Li, Kam Sing Wong, Jianbin Xu* & Keyou Yan*	Textured CH3NH3PbI3 thin film with enhanced stability for high performance perovskite solar cells. Nano Energy, 33: 485 - 96. DOI: 10.1016/j.nanoen.2017.02.002
ST2	31	#	2015	Tingxuan Ma, Kui Jiang, Shangshang Chen, Huawei Hu, Haoran Lin, Zhengke Li, Jingbo Zhao, Yuhang Liu, Yi-Ming Chang, Chung-Chin Hsiao & He Yan*	Efficient low-bandgap polymer solar cells with high open-circuit voltage and good stability. Advanced Energy Materials, 5(20): 1501282. DOI: 10.1002/aenm.201501282
ST2	32	#	2014	Yaorong Su, Weiguang Xie & Jianbin Xu*	Facile modification of Cu source-drain (S/D) electrodes for high-performance, low-voltage n-channel organic thin film transistors (OTFTs) based on C-60. Organic Electronics, 15(11): 3259-67. DOI: 10.1016/j.orgel.2014.07.032
ST2	33		2014	i Wan, Kun Chen & Jianbin Xu*	Interface engineering for CVD graphene: current status and progress. Small, 10(22) (Special issue): 4443-54. DOI: 10.1002/smll.201401458

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ST2	34		2015	Baohua Wang & Tao Chen*	Exceptionally stable CH3NH3PbI3 Films in moderate humid environmental condition, Adv Sci, 3(2): 1500262. DOI: 10.1002/advs.201500262
ST2	35	#	2016	Baohua Wang, King Young Wong, Shangfeng Yang and Tao Chen*	Crystallinity and defect state engineering in organo-lead halide perovskite for high-efficiency solar cells, J of Mat Chem A, 4: 3806-12. DOI: 10.1039/c5ta09249c
ST2	36		2015	Baohua Wang, King Young Wong, Xudong Xiao & Tao Chen*	Elucidating the reaction pathways in the synthesis of organolead trihalide perovskite for high-performance solar cells. Scientific Reports, 5: 10557. DOI: 10.1038/srep10557
ST2	37		2014	Baohua Wang, Xudong Xiao* & Tao Chen*	Perovskite photovoltaics: A high-efficiency newcomer to solar cell family. Nanoscale, 6: 12287-12297. (Invited Minireview) DOI: 10.1039/c4nr04144e
ST2	38	#	2016	Feng Wang, Wei Geng, Yang Zhou, Hong-Hua Fang, Chuan-Jia Tong, Maria Antonietta Loi, Li-Min Liu & Ni Zhao*	Phenylalkylamine passivation of organolead halide perovskites enabling high-efficiency and air-stable photovoltaic cells. Advanced Materials, 28(45): 9986 - 92. DOI: 10.1002/adma.201603062
ST2	39	#	2016	Feng Wang, Jiale Ma, Fangyan Xie, Linkai Li, Jian Chen, Jun Fan & Ni Zhao*	Organic cation-dependent degradation mechanism of organotin halide perovskites. Advanced Functional Materials, 26(20): 3417-23. DOI: 10.1002/adfm.201505127
ST2	40		2015	Feng Wang, Hui Yu, Haihua Xu & Ni Zhao*	HPbI3: A new precursor compound for highly efficient solution-processed perovskite solar cells. Advanced Functional Materials, 25(7): 1120-6. DOI: 10.1002/adfm.201404007
ST2	41	#	2017	Yu Wang, Xiang Du, Jiming Wang, Mingze Su, Xi Wan, Hui Meng, Weiguang Xie*, Jianbin Xu* & Pengyi Liu	Growth of large-scale, large-size, few-layered alpha-MoO3 on SiO2 and its photoresponse mechanism. ACS Applied Materials & Interfaces, 9(6): 5543 - 9. DOI: 10.1021/acs0mi.6b13743
ST2	42	#	2016	Fei Wu, Baohua Wang, Rui Wang, Yahan Shan, Dingyu Liu, King Young Wong, Tao Chen* & Linna Zhu*	Investigation on a dopant-free hole transport material for perovskite solar cells. RSC Advances, 6(73): 69365 - 9. DOI: 10.1039/c6ra07603c
ST2	43		2015	Xiaojing Wu, Hui Yu, Linkai Li, Feng Wang, Haihua Xu & Ni Zhao*	Composition-dependent light-induced dipole moment change in organometal halide perovskites. Journal of Physical Chemistry C, 119(2): 1253-9. DOI: 10.1021/jp511314a

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ST2	44	#	2015	Zhengcui Wu, Baohua Wang, Jian He & Tao Chen*	Synthesis of tunable-band-gap ''Open-Box" halide perovskites by use of anion exchange and internal dissolution procedures, J of Colloid & Interface Sci, 461: 162-7. DOI: 10.1016/j.jcis.2015.09.005
ST2	45	#	2016	Yubin Xiao, Han Wang, Shuang Zhou, Keyou Yan, Weiguang Xie, Zhiqiang Guan, Sai-Wing Tsang* & Jian-Bin Xu*	Efficient ternary bulk heterojunction solar cells with PCDTBT as hole-cascade material. Nano Energy, 19: 476 - 85. DOI: 10.1016/j.nanoen.2015.11.016
ST2	46	#	2014	Yubin Xiao, Shuang Zhou, Yaorong Su, Han Wang, Lei Ye, Sai-Wing Tsang*, Fangyan Xie & Jianbin Xu*	Enhanced efficiency of organic solar cells by mixed orthogonal solvents. Organic Electronics, 15(9): 2007-2013. DOI: 10.1016/ j.orgel.2014.05.011
ST2	47	#	2016	Keyou Yan*, Zhanhua Wei, Tiankai Zhang, Xiaoli Zheng, Mingzhu Long, Zefeng Chen, Weiguang Xie, Teng Zhang, Yuda Zhao, Jianbin Xu, Yang Chai* & Shihe Yang*	Near-infrared photoresponse of one-sided abrupt MAPbI(3)/TiO2 heterojunction through a tunneling process. Advanced Functional Materials, 26(46): 8545 - 54. DOI: 10.1002/adfm.201602736
ST2	48	#	2015	Keyou Yan*, Mingzhu Long, Tiankai Zhang, Zhanhua Wei, Haining Chen, Shihe Yang* & Jianbin Xu*	Hybrid halide perovskite solar cell precursors: Colloidal chemistry and coordination engineering behind device processing for high efficiency. Journal of the American Chemical Society, 137(13): 4460-8. DOI: 10.1021/jacs.5b00321
ST2	49	#	2015	Keyou Yan, Zhanhua Wei, Jinkai Li, Haining Chen, Ya Yi, Xiaoli Zheng, Xia Long, Zilong Wang, Jiannong Wang, Jianbin Xu & Shihe Yang*	High-performance graphene-based hole conductor-free perovskite solar cells: Schottky junction enhanced hole extraction and electron blocking. Small, 11(19): 2269-74. DOI: 10.1002/smll.201403348
ST2	50	#	2017	Guofang Yang, Zhengke Li, Kui Jiang, Jie Zhang, Jianya Chen, Guangye Zhang, Fei Huang, Wei Ma* & He Yan*	Optimal extent of fluorination enabling strong temperature-dependent aggregation, favorable blend morphology and high-efficiency polymer solar cells. Science China-Chemistry, 60(4): 545 - 51. DOI: 10.1007/s11426-016-0378-y
ST2	51	#	2016	Lei Ye, Hao Li, Zefeng Chen & Jianbin Xu*	Near-infrared photodetector based on MoS2/black phosphorus heterojunction. ACS Photonics, 3(4): 692-9. DOI: 10.1021/acsphotonics.6b00079
ST2	52		2014	Lei Ye, Hai-Hua Xu, Hui Yu, Wang-Ying Xu, Hao Li, Han Wang, Ni Zhao* & Jian-Bin Xu*	Ternary bulk heterojunction photovoltaic cells composed of small molecule donor additive as cascade material. Journal of Physical Chemistry C, 118(35): 20094−20099. DOI: 10.1021/jp504365y

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ST2	53	#	2016	Hui Yu, Haipeng Lu, Fangyan Xie, Shuang Zhou & Ni Zhao*	Native defect-induced hysteresis behavior in organolead iodide perovskite solar cells. Advanced Functional Materials, 26(9): 1411-9. DOI: 10.1002/adfm.201504997
ST2	54	#	2014	Hui Yu, Feng Wang, Fangyan Xie, Wenwu Li, Jian Chen & Ni Zhao*	The role of chlorine in the formation process of "CH3NH3PbI3-xClx" Perovskite. Advanced Functional Materials, 24(45): 7102-8. DOI: 10.1002/adfm.201401872.
ST2	55	#	2015	Xiaoliang Zeng, Lei Ye, Shuhui Yu, Hao Li, Rong Sun*, Jianbin Xu* & Ching-Ping Wong.	Artificial nacre-like papers based on noncovalent functionalized boron nitride nanosheets with excellent mechanical and thermally conductive properties. Nanoscale, 7(15): 6774-81. DOI: 10.1039/c5nr00228a
ST2	56	#	2016	Tiankai Zhang, Mingzhu Long, Keyou Yan, Xiaoliang Zeng, Fengrui Zhou, Zefeng Chen, Xi Wan, Kun Chen, Pengyi Liu, Faming Li, Tao Yu, Weiguang Xie* & Jianbin Xu*	Facet-dependent property of sequentially deposited perovskite thin films: Chemical origin and self-annihilation. ACS Applied Materials & Interfaces, 8(47): 32366 - 75. DOI: 10.1021/acsami.6b11986
ST2	57	#	2016	Jingbo Zhao, Yunke Li, Adrian Hunt, Jianquan Zhang, Huatong Yao, Zhengke Li, Jie Zhang , Fei Huang , Harald Ade* & He Yan*	A Difluorobenzoxadiazole building block for efficient polymer solar cells. Advanced Materials, 28: 1868-73. DOI: 10.1002/adma.201504611
ST2	58	#	2016	Jingbo Zhao, Yunke Li, Guofang Yang, Kui Jiang, Haoran Lin, Harald Ade, Wei Ma* & He Yan*	Efficient organic solar cells processed from hydrocarbon solvents. Nature Energy, 1, Article number: 15027. DOI: 10.1038/NENERGY.2015.27
ST2	59	#	2015	Jingbo Zhao, Yunke Li, Jianquan Zhang, Lu Zhang, Joshua Yuk Lin Lai, Kui Jiang, Cheng Mu, Zhengke Li, Chun Lam Clement Chan, Adrian Hunt, Subhrangsu Mukherjee, Harald Ade, Xuhui Huang & He Yan*	The influence of spacer units on molecular properties and solar cell performance of non-fullerene acceptors. J of Materials Chemistry A, 3(40): 20108-12. DOI: 10.1039/c5ta05339k.
ST2	60	#	2015	Jingbo Zhao, Yunke Li, Haoran Lin, Yuhang Liu, Kui Jiang, Cheng Mu, Tingxuan Ma, Joshua Yuk Lin Lai, Huawei Hu, Demei Yu and He Yan*	High-efficiency non-fullerene organic solar cells enabled by a difluorobenzothiadiazole-based donor polymer combined with a properly matched small molecule acceptor. Energy Environ Sci, 8: 520-525 DOI: 10.1039/C4EE02990A
ST2	61		2016	Xi Zhou, Dien Wang, Ji Wang, and Shih-Chi Chen*	Precision design and control of a flexure-based roll-to-roll printing system. Precision Engineering 45: 332 – 41. DOI: 10.1016/j.precisioneng.2016.03.010

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	No.	Inter-institutional collaborations are denoted with #	Year of publications	Author(s) (corresponding author are denoted with an asterisk*)	Title and iournal/book
ST2	62		2015	Xi Zhou*, Huihua Xu*, Jiyi Cheng, Ni Zhao, & Shih-Chi Chen.	Flexure-based roll-to-roll platform: A practical solution for realizing large-area microcontact printing. Scientific Reports, 5: 10402. DOI:1040210.1038/srep10402
ST2	63	#	2016	Yang Zhou, Feng Wang, Hong-Hua Fang, Maria Antonietta Loi, Fang-Yan Xie, Ni Zhao* & Ching-Ping Wong*	Distribution of bromine in mixed iodide-bromide organolead perovskites and its impact on photovoltaic performance. Journal of Materials Chemistry A, 4(41): 16191 - 7. DOI: 10.1039/c6ta07647e
ST2	64	#	2016	Yangyang Zhou, Tiankai Zhang, Chunmei Li, Zhimin Liang, Li Gong, Jian Chen, Weiguang Xie, Jianbin Xu & Pengyi Liu	Rapid growth of high quality perovskite crystal by solvent mixing. CrystEngComm, 18(7): 1184-9. DOI: 10.1039/c5ce02428e
ST2	65	#	2016	Zonglong Zhu, Qifan Xue, Hexiang He, Kui Jiang, Zhicheng Hu, Yang Bai, Teng Zhang, Shuang Xiao, Kenan Gundogdu, Bhoj Raj Gautam, Harald Ade, Fei Huang, Kam Sing Wong, Hin-Lap Yip*, Shihe Yang* & He Yan*	A PCBM electron transport layer containing small amounts of dual polymer additives that enables enhanced perovskite solar cell performance. Advanced Science, 3(9): 1500353. DOI: 10.1002/advs.201500353

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Subtopic 3: Alternative Solar Technologies					
ST3	1	#	2015	AR Damanpack*, M Bodaghi, WH Liao, MM Aghdam & M Shakeri.	A simple and efficient 1-D macroscopic model for shape memory alloys considering ferro-elasticity effect. Smart Structures and Systems, 16(4): 641-65. DOI: 10.12989/sss.2015.16.4.641
ST3	2	#	2015	A.R. Damanpack, W.H. Liao*, M.M. Aghdam, M. Shakeri, M. Bodaghi	Micro–macro thermo-mechanical analysis of axisymmetric shape memory alloy composite cylinders. Composite Structures, 131: 1001–1016.
ST3	3	#	2016	Eugeny A. Ermilov,* Jian-Yong Liu, Roel Menting, Ying-Si Huang, Beate Röder & Dennis K. P. Ng*	An artificial photosynthetic model based on a molecular triad of boron dipyrromethene and phthalocyanine, Phys. Chem. Chem. Phys., 18: 10964-75. DOI: 10.1039/c6cp00920d
ST3	4	#	2016	Zhuofeng Hu, Gang Liu, Xingqiu Chen, Zhurui Shen* & Jimmy C. Yu*	Enhancing charge separation in metallic photocatalysts: A case study of the conducting molybdenum dioxide. Advanced Functional Materials, 26(25): 4445 - 55. DOI: 10.1002/adfm.201600239
ST3	5	#	2016	Zhuofeng Hu, Zhurui Shen* & Jimmy C. Yu*	Covalent fixation of surface oxygen atoms on hematite photoanode for enhanced water oxidation. Chemistry of Materials, 28(2): 564-72. DOI: 10.1021/acs.chemmater.5b04058
ST3	6	#	2017	Zhuofeng Hu, Zhurui Shen* & Jimmy C. Yu*	Converting carbohydrates to carbon-based photocatalysts for environmental treatment. Environmental Science & Technology, 51(12): 7076 - 83. DOI: 10.1021/acs.est.7b00118
ST3	7	#	2017	Zhuofeng Hu, Zhurui Shen* & Jimmy C. Yu*	Phosphorus containing materials for photocatalytic hydrogen evolution. Green Chemistry, 19(3): 588 - 613. DOI: 10.1039/c6gc02825j
ST3	8	#	2017	Zhuofeng Hu, Zhurui Shen*, Jimmy C. Yu* & Fangyi Cheng*	Intrinsic defect based homojunction: A novel quantum dots photoanode with enhanced charge transfer kinetics. Applied Catalysis B-Environmental, 203: 829 - 38. DOI: 10.1016/j.apcatb.2016.10.079

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ST3	9	#	2015	Zhuofeng Hu, Mingkun Xu, Zhurui Shen* & Jimmy C. Yu*	A nanostructured chromium(III) oxide/tungsten(VI) oxide p–n junction photoanode toward enhanced efficiency for water oxidation. J. Mater. Chem. A, 3: 14046. DOI: 10.1039/c5ta02528a
ST3	10		2015	Zhuofeng Hu, Jimmy C. Yu*, Tian Ming & Jianfang Wang	A wide-spectrum-responsive TiO2 photoanode for photoelectrochemical cells. Applied Catalysis B: Environmental, 168-169: 483–489. http://dx.doi.org/10.1016/j.apcatb.2015.01.018
ST3	11	#	2016	Zhuofeng Hu, Luyan Yuan, Zhifeng Liu, Zhurui Shen,* & Jimmy C. Yu*	An elemental phosphorus photocatalyst with a record high hydrogen evolution efficiency. Angewandte Chemie, 55: 9580-5. DOI: 10.1002/anie.201603331
ST3	12	#	2017	Henglei Jia, Xiao-Ming Zhu, Ruibin Jiang & Jianfang Wang*	Aerosol-sprayed gold/ceria photocatalyst with superior plasmonic hot electron-enabled visible-light activity. Applied Materials & Interfaces, 9: 2560 – 71. DOI: 10.1021/acsami.6b15184
ST3	13	#	2016	Ruibin Jiang, Feng Qin, Yejing Liu, Xing Yi Ling, Jun Guo, Minghua Tang, Si Cheng & Jianfang Wang*	Colloidal gold nanocups with orientation-dependent plasmonic properties. Advanced Materials, 28: 6322 – 31. DOI: 10.1002/adma.201601442
ST3	14		2016	Zexun Jin, Zhuofeng Hu, Jimmy C. Yu* & Jianfang Wang	Room temperature synthesis of a highly active Cu/Cu2O photocathode for photoelectrochemical water splitting. Journal of Materials Chemistry A, 4(36): 13736 - 41. DOI: 10.1039/c6ta05274f
ST3	15		2017	Zexun Jin, Yecheng Li & Jimmy C. Yu*	Gaining hands-on experience with solid-state photovoltaics through constructing a novel n-Si/CuS solar Cell. Journal of Chemical Education, 94(4): 476 - 9. DOI: 10.1021/acs.jchemed.6b00617
ST3	16	#	2015	Long Kuai*, Junxin Wang*, Tian Ming*, Caihong Fang, Zhenhua Sun, Baoyou Geng & Jianfang Wang.	Aerosol-spray diverse mesoporous metal oxides from metal nitrates. Scientific Reports, 5:9923. DOI: 10.1038/srep09923
ST3	17	#	2017	Hao Li, Feng Qin, Zhiping Yang, Ximin Cui, Jianfang Wang* & Lizhi Zhang*	New reaction pathway induced by plasmon for selective benzyl alcohol oxidation on BiOCl possessing oxygen vacancies, Journal of the American Chemical Society, 139: 3513 – 21. DOI: 10.1021/jacs.6b12850

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ST3	18		2015	Yecheng Li, Lei Zhang, Zhuofeng Hu & Jimmy C. Yu*	Synthesis of 3D structured graphene as a high performance catalyst support for methanol electro-oxidation. Nanoscale, 7(25): 10896. DOI: 10.1039/c5nr02766g
ST3	19	#	2014	Junrui Liang*, Henry Shu-Hung Chung & Wei-Hsin Liao.	Dielectric loss against piezoelectric power harvesting. Smart Materials and Structures, 23(9): 092001 (8pp). DOI: 10.1088/0964-1726/23/9/092001
ST3	20	#	2016	Shenghua Liu, Ruibin Jiang, Peng You, Xingzhong Zhu, Jianfang Wang & Feng Yan*	Au/Ag core–shell nanocuboids for high-efficiency organic solar cells with broadband plasmonic enhancement. Energy & Environmental Science, 9: 898-905. DOI: 10.1039/c5ee03779d
ST3	21	#	2014	Zhurui Shen, Zhuofeng Hu, Wanjun Wang, Siu-Fung Lee, Donald K. L. Chan, Yecheng Li, Ting Gu & Jimmy C. Yu*	Crystalline phosphorus fibers: Controllable synthesis and visible-light-driven photocatalytic activity. Nanoscale, 6: 14163 - 14167. DOI: 10.1039/C4NR04250F
ST3	22	#	2015	Zhurui Shen, Shoutian Sun, Wanjun Wang, Jianwen Liu, Zhifeng Liu & Jimmy C. Yu*	A black–red phosphorus heterostructure for efficient visible-light-driven photocatalysis. J. Mater. Chem. A, 3: 3285. DOI: 10.1039/c4ta06871h
ST3	23	#		Wen-Jing Shi, Takumi Kinoshita* & Dennis K. P. Ng*	Push–pull distyryl boron dipyrromethenes as near-infrared sensitizers for dye-sensitized solar cells. Asian Journal of Organic Chemistry, Vol. & pagination not yet available. DOI: 10.1002/ajoc.201700282
ST3	24	#	2017	Wen-Jing Shi, Takumi Kinoshita* & Dennis K. P. Ng*	Ethynyl-linked donor-p-acceptor boron dipyrromethenes for panchromatic dye-sensitized solar cells. Asian Journal of Organic Chemistry, 6: 758 - 767. DOI: 10.1002/ajoc.201700121
ST3	25	#	2016	Hao Tang, Kunpeng Dou, Yucheng Xiong, Feng Wang, Yang Zhao, Xiaomeng Wang, Qiang Fu, Juekuan Yang, Ni Zhao and Dongyan Xu*	Unusual thermal transport behavior in self-assembled fullerene Nanorods. RSC Adv., 6: 67509-13. DOI: 10.1039/c6ra14042d
ST3	26	#	2016	Hao Tang, Yucheng Xiong, Fengshuo Zu, Yang Zhao, Xiaomeng Wang, Qiang Fu, Jiansheng Jie, Juekuan Yang* and Dongyan Xu*	Length-dependent thermal transport in one-dimensional self-assembly of planar p-conjugated molecules. Nanoscale, 8: 11932-9. DOI: 10.1039/c5nr09043a
ST3	27	#	2016	Yan-Jun Wan, Wen-Hu Yang, Shu-Hui Yu, Rong Sun, Ching-Ping Wong & Wei-Hsin Liao*	Covalent polymer functionalization of graphene for improved dielectric properties and thermal stability of epoxy composites. Composites Science and Technology, 122: 27-35. DOI: 10.1016/j.compscitech.2015.11.005

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	No.	Inter-institutional collaborations are denoted with #	Year of publications	Author(s) (corresponding author are denoted with an asterisk*)	Title and iournal/book
ST3	28	#	2016	Yan-Jun Wan, Shu-Hui Yu, Wen-Hu Yang, Peng-Li Zhu, Rong Sun*, Ching-Ping Wong & Wei-Hsin Liao*	Tuneable cellular-structured 3D graphene aerogel and its effect on electromagnetic interference shielding performance and mechanical properties of epoxy composites. RSC Advances, 6: 56589-98. DOI: 10.1039/c6ra09459g
ST3	29	#	2017	Yan-Jun Wan, Peng-Li Zhu, Shu-Hui Yu, Rong Sun*, Ching-Ping Wong & Wei-Hsin Liao*	Ultralight, super-elastic and volume-preserving cellulose fiber/graphene aerogel for high-performance electromagnetic interference shielding. Carbon, 115: 629 - 39. DOI: 10.1016/j.carbon.2017.01.054
ST3	30		2017	Yan-Jun Wan, Peng-Li Zhu, Shu-Hui Yu, Wen-Hu Yang, Rong Sun*, Ching-Ping Wong & Wei-Hsin Liao*	Barium titanate coated and thermally reduced graphene oxide towards high dielectric constant and low loss of polymeric composites. Composites Science and Technology, 141: 48 - 55. DOI: 10.1016/j.compscitech.2017.01.010
ST3	31	#	2014	Junxin Wang*, Tian Ming*, Zhao Jin, Jianfang Wang, Ling-Dong Sun & Chun-Hua Yan	Photon energy upconversion through thermal radiation with the power efficiency reaching 16%. Nature Communications, 5: 5669. DOI: 10.1038/ncomms6669
ST3	32	#	2015	Wanjun Wang, Xingqiu Chen, Gang Liu, Zhurui Shena, Dehua Xia, Po Keung Wong & Jimmy C. Yu*	Monoclinic dibismuth tetraoxide: A new visible-light-driven photocatalyst for environmental remediation. Applied Catalysis B: Environmental, 176–177: 444–453. http://dx.doi.org/10.1016/j.apcatb.2015.04.026
ST3	33		2016	Wanjun Wang, Yecheng Li, Zhiwen Kang, Feng Wang & Jimmy C. Yu*	A NIR-driven photocatalyst based on alpha-NaYF4:Yb,Tm@TiO2 core-shell structure supported on reduced graphene oxide. Applied Catalysis B-Environmental, 182: 184-92. DOI: 10.1016/j.apcatb.2015.09.022
ST3	34		2014	Wanjun Wang, Jimmy C. Yu*, Zhurui Shen, Donald K.L. Chan & Ting Gu.	g-C3N4 quantum dots: Direct synthesis, upconversion property and photocatalytic application. Chemical Communications, 50(70): 10148-10150. DOI: 10.1039/C4CC02543A
ST3	35	#	2015	Dehua Xia, Zhurui Shen, Guocheng Huang, Wanjun Wang, Jimmy C. Yu* & Po Keung Wong*	Red phosphorus: An earth-abundant elemental photocatalyst for "green" bacterial inactivation under visible light. Environ. Sci. Technol., 49: 6264−6273. DOI: 10.1021/acs.est.5b00531

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ST3	36	#	2015	Juekuan Yang, Hao Tang, Yang Zhao, Yin Zhang, Jiapeng Li, Zhonghua Ni, Yunfei Chen & Dongyan Xu*	Thermal conductivity of zinc blende and wurtzite CdSe nanostructures, Nanoscale, 7: 16071-8. DOI: 10.1039/c5nr04117a
ST3	37		2015	Lei Zhang, Yecheng Li, Zexun Jin, King Ming Chan & Jimmy C Yu*	Mesoporous carbon/CuS nanocomposites for pH-dependent drug delivery and near-infrared chemo-photothermal therapy. RSC Adv, 5(113): 93226 - 33. DOI: 10.1039/c5ra19458j
ST3	38		2016	Lei Zhang, Yecheng Li, Jimmy C. Yu* & King Ming Chan	Redox-responsive controlled DNA transfection and gene silencing based on polymer-conjugated magnetic nanoparticles. RSC Advances, 6(76): 72155 - 64. DOI: 10.1039/c6ra16578h
ST3	39	#	2015	Shouren Zhang, Ruibin Jiang, Ya-Ming Xie, Qifeng Ruan, Baocheng Yang*, Jianfang Wang* & Hai-Qing Lin*	Colloidal moderate-refractive-index Cu2O nanospheres as visible-region nanoantennas with electromagnetic resonance and directional light-scattering properties. Adv Mat, 27: 7432 - 9. DOI: 10.1002/adma.201502917.
ST3	40	#	2016	Wenhua Zhang*, Juekuan Yang* & Dongyan Xu*	A high power density micro-thermoelectric generator fabricated by an integrated bottom-up approach. Journal of Microelectromechan. Syst. 25: 744-9. DOI: 10.1109/JMEMS.2016.2565504
ST3	41	#	2015	Aijun Zhou, Qiang Fu, Wenhua Zhang, Bin Yang, Jingze Li, Pawel Ziolkowski, Eckhard Mueller & Dongyan Xu*	Enhancing the thermoelectric properties of the electroplated Bi2Te3 films by tuning the pulse off-to-on ratio. Electrochimica Acta, 178: 217-24. DOI: 10.1016/j.electacta.2015.07.164
ST3	42	#	2016	Aijun Zhou*, Weihang Wang, Xu Yao, Bin Yang, Jingze Li, Qiang Zhao, Chao Wang, Dongyan Xu, Pawel Ziolkowski* and Eckhard Mueller	Impact of the film thickness and substrate on the thermopower measurement of thermoelectric films by the potential-Seebeck microprobe (PSM). Appl. Therm. Eng., 107: 552 - 9. DOI: 10.1016/j.applthermaleng.2016.05.037
ST3	43	#	2015	Xiaolu Zhuo, Xingzhong Zhu, Qian Li, Zhi Yang* & Jianfang Wang*	Gold nanobipyramid-directed growth of length-variable silver nanorods with mMultipolar plasmon resonances. ACS Nano, 9(7): 7523–7535.

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Subtopic 4: Energy Storage					
ST4	1		2015	Hongning Chen & Yi-Chun Lu*	A high-energy-density multiple redox semi-solid-liquid flow battery, Adv Energy Mat, 6: 1502183. DOI: 10.1002/aenm.201502183
ST4	2		2015	Hongning Chen, Qingli Zou, Zhuojian Liang, Hao Liu, Quan Li & Yi-Chun Lu*	Sulphur-impregnated flow cathode to enable high-energy-density lithium flow batteries. Nature Communications, 5:5877, DOI: 10.1038/ncomms6877.
ST4	3		2015	Hongning Chen, Qingli Zou, Zhuojian Liang, Hao Liu, Quan Li & Yi-Chun Lu*	A sulfur-impregnated flow cathode for high-energy lithium flow batteries. 227th Electrochemical Society (ECS) Meeting Chicago, United States of America, 2015.05.27.
ST4	4		2015	Jizhang Chen, Junling Xu, Shuang Zhou, Ni Zhao & Ching-Ping Wong*	Template-grown graphene/porous Fe2O3 nanocomposite: A high-performance anode material for pseudocapacitors. Nano Energy, 15: 719–728. http://dx.doi.org/10.1016/j.nanoen.2015.05.021
ST4	5		2015	Jizhang Chen, Junling Xu, Shuang Zhou, Ni Zhao* & Ching-ping Wong*	Facile and scalable fabrication of three-dimensional Cu(OH)2 nanoporous nanorods for solid-state supercapacitors. J Mater Chem A, DOI: 10.1039/C5TA04164C
ST4	6		2016	Jizhang Chen, Junling Xu, Shuang Zhou, Ni Zhao* & Ching-ping Wong*	Amorphous nanostructured FeOOH and Co-Ni double hydroxides for high-performance aqueous asymmetric supercapacitors. Nano Energy, 21: 145-53. DOI: 10.1016/j.nanoen.2015.12.029
ST4	7		2016	Jizhang Chen, Junling Xu, Shuang Zhou, Ni Zhao* & Ching-ping Wong*	Nitrogen-doped hierarchically porous carbon foam: A free-standing electrode and mechanical support for high-performance supercapacitors. Nano Energy, 25: 193-202. DOI: 10.1016/j.nanoen.2016.04.037
ST4	8	#	2017	Jizhang Chen*, Xiaoyan Zhou, Changtong Mei, Junling Xu & Ching-Ping Wong*	Improving the sodiation performance of Na2Ti3O7 through Nb-doping. Electrochimica Acta, 224: 446 - 51. DOI: 10.1016/j.electacta.2016.12.094
ST4	9	#	2016	Jizhang Chen*, Xiaoyan Zhou, Changtong Mei, Junling Xu, Shuang Zhou & Ching-Ping Wong	Pyrite FeS2 nanobelts as high-performance anode material for aqueous pseudocapacitor. Electrochimica Acta, 222: 172 - 6. DOI: 10.1016/j.electacta.2016.10.181

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ST4	10	#	2017	Jizhang Chen*, Xiaoyan Zhou, Changtong Mei, Junling Xu, Shuang Zhou & Ching-Ping Wong	Evaluating biomass-derived hierarchically porous carbon as the positive electrode material for hybrid Na-ion capacitors. J of Power Sources, 342: 48 - 55. DOI: 10.1016/jjpowsour.2016.12.034
ST4	11		2017	Guangtao Cong, Yucun Zhou, Zhejun Li & Yi-Chun Lu*	A highly concentrated catholyte enabled by a low-melting-point ferrocene derivative. ACS Energy Letters, 2(4): 869 - 75. DOI: 10.1021/acsenergylett.7b00115
ST4	12	#	2017	Cuiping Han, Yan-Bing He, Ming Liu, Baohua Li*, Quan-Hong Yang, Ching-Ping Wong* & Feiyu Kang	A review of gassing behavior in Li4Ti5O12-based lithium ion batteries. J of Materials Chemistry A, 5(14): 6368 - 81. DOI: 10.1039/c7ta00303j
ST4	13		2016	Zhejun Li, Guoming Weng, Qingli Zou, Guangtao Cong & Yi-Chun Lu*	A high-energy and low-cost polysulfide/iodide redox flow battery. Nano Energy, 30: 283 - 292. DOI: 10.1016/j.nanoen.2016.09.043
ST4	14		2016	Zhuojian Liang & Yi-Chun Lu*	Critical role of redox mediator in suppressing charging instabilities of lithium-oxygen batteries. J of The American Chemical Society, 138(24): 7574 - 83. DOI: 10.1021/jacs.6b01821
ST4	15		2015	Yu Wang, Zhuojian Liang & Yi-Chun Lu*	Probing the working mechanism of electrocatalyst-assisted nonaqueous lithium-oxygen evolution reaction. 227th Electrochemical Society (ECS) Meeting Chicago, United States of America, 2015.05.27.
ST4	16		2016	Yu Wang, Zhuojian Liang, Qingli Zou, Guangtao Gong & Yi-Chun Lu*	Mechanistic insights into catalyst-assisted nonaqueous oxygen evolution reaction in lithium-oxygen batteries. J of Physical Chemistry C, 120(12): 6459 - 66. DOI: 10.1021/acs.jpcc.6b00984
ST4	17		2017	Guo-Ming Weng, Zhejun Li, Guangtao Cong, Yucun Zhou & Yi-Chun Lu*	Unlocking the capacity of iodide for high-energy-density zinc/polyiodide and lithium/polyiodide redox flow batteries. Energy & Environmental Science, 10(3): 735 - 41. DOI: 10.1039/c6ee03554j
ST4	18	#	2016	Binghe Xie, Yang Wang, Wenhui Lai, Wei Lin, Ziyin Lin, Zhexu Zhang, Peichao Zou, Yang Xu, Shuang Zhou, Cheng Yang*, Feiyu Kang & Ching-Ping Wong*	Laser-processed graphene based micro-supercapacitors for ultrathin, rollable, compact and designable energy storage components. Nano Energy, 26: 276 - 285. DOI: 10.1016/j.nanoen.2016.04.045

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ST4	19	#	2016	Chao Xu, Jie Liao, Cheng Yang*, Ruozheng Wang, Dang Wu, Peichao Zou, Ziyin Lin, Baohua Li, Feiyu Kang & Ching-Ping Wong*	An ultrafast, high capacity and superior longevity Ni/Zn battery constructed on nickel nanowire array film. Nano Energy, 30: 900 - 8. DOI: 10.1016/j.nanoen.2016.07.035
ST4	20		2016	Shuang Zhou, Linkai Li, Hui Yu, Jizhang Chen, Ching-Ping Wong* & Ni Zhao*	Thin film electrochemical capacitors based on organolead triiodide perovskite. Advanced Electronic Materials, 2(7): 1600114. DOI: 10.1002/aelm.201600114
ST4	21		2015	Shuang Zhou, Junling Xu, Yubin Xiao, Ni Zhao* & Ching-PingWong*	Low-temperature Ni particle-templated chemical vapor deposition growth of curved graphene for supercapacitor applications. Nano Energy 13: 458–466. http://dx.doi.org/10.1016/j.nanoen.2015.03.010
ST4	22		2016	Qingli Zou & Yi-Chun Lu*	Solvent-dictated lithium sulfur redox reactions: An operando UV-vis spectroscopic study. J of Physical Chemistry Letters, 7(8): 1518 - 25. DOI: 10.1021/acs.jpclett.6b00228

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Subtopic 5: Microgrid Monitoring, Management, and Comprehensive Security					
ST5	Energy Generation Scheduling				
ST5	1	#	2014	Jose Camacho*, Ying Zhang*, Minghua Chen* & Dah Ming Chiu*	Balance your bids before your bits: The economics of geographic load-balancing, in Proceedings of the fifth International Conference on Future Energy Systems (ACM e-Energy), Cambridge, UK, June 11-13, 2014. DOI: 10.1145/2602044.2602068
ST5	2	#	2016	Chi-Kin Chau*, Guanglin Zhang* & Minghua Chen*	Cost minimizing online algorithms for energy storage management with worst-case guarantee. IEEE Transactions on Smart Grid, 7(6): 2691. DOI: 10.1109/TSG.2016.2514412
ST5	3	#	2015	Chuansheng Dong*, Haibo Zeng* & Minghua Chen*	Online algorithms for automotive idling reduction with effective statistics. IEEE Trans. on Computer-Aided Design of Integrated Circuits and Systems, 34(11): 1742-55. (Special Section on Automotive Embedded Systems and Software) DOI: 10.1109/TCAD.2015.2469779
ST5	4	#	2014	Qiuyu Peng, Minghua Chen, Anwar Walid & Steven Low	Energy efficient multipath TCP for mobile devices. MobiHoc '14 Proceedings of the 15th ACM international symposium on Mobile ad hoc networking and computing, August 11–14, 2014, Philadelphia, PA, USA. http://dx.doi.org/10.1145/2632951.2632971
ST5	5	#	2017	Hanling Yi, Mohammad H. Hajiesmaili, Ying Zhang, Minghua Chen & Xiaojun Lin	Impact of the uncertainty of distributed renewable generation on deregulated electricity supply chain. IEEE Transactions on Smart Grid, Vol & pagination not yet available. DOI: 10.1109/TSG.2017.2705289
ST5	6	#	2014	Shaoquan Zhang, Longbo Huang, Minghua Chen & Xin Liu	Effect of Proactive Serving on User Delay Reduction in Service Systems. SIGMETRICS'14, June 16–20, 2014, Austin, Texas, USA. DOI: http://dx.doi.org/10.1145/2591971.2592024.
ST5	7	#	2016	Ying Zhang, Mohammad H. Hajiesmaili, Sinan Cai Minghua Chen* & Qi Zhu	Peak-aware online economic dispatching for microgrids. IEEE Transactions on Smart Grid. Vol & pagination pending. DOI: 10.1109/TSG.2016.2551282.

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ST5	8		2015	Ying Zhang, Mohammad Hassan Hajiesmaili & Minghua Chen	Peak-aware online economic dispatching for microgrids. e-Energy '15 Proceedings of the 2015 ACM Sixth International Conference on Future Energy Systems, e-Energy'15, July 14 - 17, 2015, Bangalore, India. DOI: http://dx.doi.org/10.1145/2768510.2768538.
ST5	9	#	2017	Shizhen Zhao*, Xiaojun Lin* & Minghua Chen	Robust online algorithms for peak-minimizing EV charging under multi-stage uncertainty. IEEE Transactions on Automatic Control. Vol & pagination not yet available. DOI: 10.1109/TAC.2017.2699290
ST5	10	#	2015	Shizhen Zhao*, Xiaojun Lin* & Minghua Chen*	Peak-minimizing online EV charging: Price-of-uncertainty and algorithm robustification, in Proceedings of IEEE INFOCOM, Hong Kong, Apr. 26 - May 1, 2015.
ST5	11	#	2015	Ruiting Zhou*, Zongpeng Li*, Chuan Wu* & Minghua Chen*	Demand response in smart grids: A randomized auction approach. IEEE J on Selected Areas in Communications, 33(12): 2540 - 53, DOI: 10.1109/JSAC.2015.2481208
ST5	Demand Management				
ST5	12	#	2017	Shahab Bahrami*, Vincent W.S. Wong* & Jianwei Huang*	An online learning algorithm for demand response in smart grid. IEEE Transactions on Smart Grid. Vol & pagination not yet available. DOI: 10.1109/TSG.2017.2667599
ST5	13	#	2015	Liping Qian, Yuan Wu, Ying Jun (Angela) Zhang & Jianwei Huang	Demand response management via real-time electricity price control in smart grids, Book Chapter in Smart Grid: Networking, Data Management and Business Models, CRC Press. Pages 169-191. DOI: 10.1201/b19664-11 http://ncel.ie.cuhk.edu.hk/sites/default/files/demandresponse_chapter_2016.pdf
ST5	14		2014	Hao Wang* & Jianwei Huang*	Hybrid renewable energy investment in microgrid. IEEE SmartGridComm, Venice, Italy, November, 2014.
ST5	15		2015	Hao Wang* & Jianwei Huang*	Bargaining-based energy trading market for interconnected microgrids, IEEE ICC, London, UK, 2015.
ST5	16		2016	Hao Wang & Jianwei Huang	Incentivizing energy trading for interconnected microgrids. IEEE Transactions on Smart Grid, Vol & pagination not yet available. DOI: 10.1109/TSG.2016.2614988

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ST5	17		2016	Hao Wang* & Jianwei Huang*	Cooperative planning of renewable generations for interconnected microgrids. IEEE Transactions on Smart Grid, 7(5): 2486 - 96. DOI: 10.1109/TSG.2016.2552642
ST5	18		2017	Hao Wang* Jianwei Huang*	Joint investment and operation of microgrid. IEEE Transactions on Smart Grid, 8(2): 833 - 45. DOI: 10.1109/TSG.2015.2501818
ST5	19	#	2016	Hao Wang*, Jianwei Huang*, Xiaojun Lin* & H Mohsenian-Rad*	Proactive demand response for data centers: A win-win solution. IEEE Transactions on Smart Grid, 7(3): 1584 - 96. DOI: 10.1109/TSG.2015.2501808
ST5	20	#	2014	Wei Yuan, Jianwei Huang & Ying Jun (Angela) Zhang	Competitive charging station pricing for plug-in electric vehicles, IEEE SmartGridComm, Venice, Italy, November, 2014
ST5	Storage Management				
ST5	21	#	2017	Suzhi Bi* & Ying Jun (Angela) Zhang*	Graph-based cyber security analysis of state estimation in smart Power Grid. IEEE Communications Magazine, 55(4): 176 - 183. DOI: 10.1109/MCOM.2017.1600210C
ST5	22		2017	Wanrong Tang* & Ying Jun (Angela) Zhang*	A model predictive control approach for low-complexity electric vehicle charging scheduling: Optimality and scalability. IEEE Transactions on Power Systems, 32(2): 1050 - 63. DOI: 10.1109/TPWRS.2016.2585202
ST5	23	#	2016	Wanrong Tang, Suzhi Bi* & Ying Jun (Angela) Zhang	Online charging scheduling algorithms of electric vehicles in smart grid: An overview. IEEE Communications Magazine, 54(12): 76 - 83. DOI: 10.1109/MCOM.2016.1600346CM
ST5	24	#	2017	Wei Yuan*, Jianwei Huang* & Ying Jun Zhang*	Competitive charging station pricing for plug-in electric vehicles. IEEE Transactions on Smart Grid, 8(2): 627. DOI: 10.1109/TSG.2015.2504502
ST5	25	#	2017	Ying Jun (Angela) Zhang, Changhong Zhao, Wanrong Tang & Steven H. Low	Profit-maximizing planning and control of battery energy storage systems for primary frequency control. IEEE Transactions on Smart Grid, Vol & pagination not yet available. DOI 10.1109/TSG.2016.2562672

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ST5	Smart Building Management				
ST5	26		2015	Lei Zhan* & Dah Ming Chiu*	Encouraging Energy Conservation in Campus Dormitory via Monitoring and Policies. e-Energy '15 Proceedings of the 2015 ACM Sixth International Conference on Future Energy Systems, July 14–17, 2015, Bangalore, India. DOI: http://dx.doi.org/10.1145/2768510.2768516.

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Subtopic 6: Laboratory and Field Demonstration of MGs with PV Modules and Smart Storage					
ST6	1	#	2017	Yu Cai, Jin Lin, Can Wan* & Yonghua Song	A stochastic short-term operation model for an active distribution company considering network constraints and demand response. Int Trans Electr Energ Syst,.27: e2321. DOI: 10.1002/etep.2321
ST6	2	#	2016	Songjian Chai*, Zhao Xu* & Wai Kin Wong*	Optimal granule-based PIs construction for solar irradiance forecast. IEEE Transactions on Power Systems, 31(4): 3332-3. DOI: 10.1109/TPWRS.2015.2473097
ST6	3	#	2016	Yingying Chen*, Zhao Yang Dong*, Ke Meng*, Fengji Luo*, Zhao Xu* & Kit Po Wong*	Collector system layout optimization framework for large-scale offshore wind farms. IEEE Transactions on Sustainable Energy, 7(4): 1398 – 1407. DOI: 10.1109/TSTE.2016.2549602
ST6	4	#	2015	Youwei Jia, Yang Gao, Zhao Xu*, Kit Po Wong, Loi Lei Lai, Yusheng Xue, Zhao Yang Dong & David J. Hill.	Powering China's sustainable development with renewable energies: Current status and future trend. Electric Power Components and Systems, 43(8-10): 1193-1204
ST6	5	#	2017	Youwei Jia, Chun Sing Lai, Zhao Xu*, Songjian Chai & Kit Po Wong	Adaptive partitioning approach to self-sustained smart grid. IET Generation, Transmission & Distribution, 11(2): 485 – 94. DOI: 10.1049/iet-gtd.2016.1031
ST6	6	#	2015	Youwei Jia*, Ke Meng* & Zhao Xu*	N-k induced cascading contingency screening. IEEE Transactions on Power System, 30(5): 2824-5. DOI of conference: 10.1109/TPWRS.2014.236172 URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6923476&isnumber=4374138 DOI of paper: 10.1109/TPWRS.2014.2361723
ST6	7		2017	Youwei Jia* & Zhao Xu*	A direct solution to biobjective partitioning problem in electric power networks. IEEE Transactions on Power Systems, (32)3: 2481 – 3. DOI: 10.1109/TPWRS.2016.2607638
ST6	8	#	2016	Youwei Jia*, Zhao Xu*, Loi Lei Lai* & Kit Po Wong*	Risk-based power system security analysis considering cascading outages. IEEE Transactions on Industrial Informatics, 12(2): 872 - 82. DOI: 10.1109/TII.2015.2499718
ST6	9	#	2014	Qing Li, Zhao Xu* & Li Yang	Recent advancements on the development of microgrids. Journal of Modern Power Systems and Clean Energy, 2(3): 206-211, DOI: 10.1007/s40565-014-0069-8

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ST6	10		2017	Yujun Li & Zhao Xu*	Coordinated control of wind farms and MTDC grids for system frequency support. Electric Power Components and Systems, 45(4): 451 – 64. DOI: 10.1080/15325008.2016.1264500
ST6	11	#	2017	Yujun Li*, Zhao Xu* & Ke.Meng*	Optimal power sharing control of wind turbines. IEEE Transactions on Power Systems, 32(1): 824 – 5. DOI: 10.1109/TPWRS.2016.2549741
ST6	12		2015	Yujun Li, Zhao Xu*, Hon Wing Ngan & Siu-Chung Wong	A novel topology design for integration of offshore wind farm via HVDC transmission. Electric Power Components and Systems, 43(8-10): 1100-1112
ST6	13	#	2016	Fengji Luo, Zhao Xu*, Ke Meng & Zhao Yang Dong	Optimal operation scheduling for microgrid with high penetrations of solar power and thermostatically controlled loads. Science and Technology for the Built Environment, 22(6): 666 – 73. DOI: 10.1080/23744731.2016.1188652
ST6	14	#	2015	Ke Meng*, Zhao Yang Dong*, Zhao Xu* & Steven R. Weller*	Cooperation-driven distributed model predictive control for energy storage systems. IEEE Transactions on Smart Grid, 6(6): 2583 - 5. DOI: 10.1109/TSG.2015.2449760
ST6	15		2014	Ming Niu, Can Wan & Zhao Xu*.	A review on applications of heuristic optimization algorithms for optimal power flow in modern power systems. Journal of Modern Power Systems and Clean Energy, 2(4): 289-297
ST6	16	#	2016	Can Wan*, Jin Lin, Wangfang Guo & Yonghua Song	Maximum uncertainty boundary of volatile distributed generation in active distribution network. IEEE Transactions on Smart Grid. Vol & pagination not yet available. DOI: 10.1109/TSG.2016.2623760
ST6	17	#	2017	Can Wan*, Jin Lin, Yonghua Song, Zhao Xu & Guangya Yang	Probabilistic forecasting of photovoltaic generation: An efficient statistical approach. IEEE Transactions on Power Systems, 32(3): 2471 - 72. DOI: 10.1109/TPWRS.2016.2608740
ST6	18	#	2017	Can Wan*, Jin Lin*, Jianhui Wang*, Yonghua Song* & Zhao Yang Dong*	Direct quantile regression for nonparametric probabilistic forecasting of wind power generation. IEEE Transactions on Power System, 32(4): 2767-78. DOI: 10.1109/TPWRS.2016.2625101

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ST6	19	#	2017	Can Wan*, Ming Niu*, Yonghua Song* & Zhao Xu*	Pareto optimal prediction intervals of electricity price. IEEE Transactions on Power Systems, 32(1): 817 – 9. DOI: 10.1109/TPWRS.2016.2550867
ST6	20	#	2016	Can Wan*, Yonghua Song, Zhao Xu*, Guangya Yang, Arne Hejde Nielsen	Probabilistic wind power forecasting with hybrid artificial neural networks. Electric Power Components and Systems, 44(15): 1656 - 1668. DOI: 10.1080/15325008.2016.1198437
ST6	21	#	2017	Can Wan*, Jianhui Wang*, Jin Lin*, Yonghua Song* & Z.Y. Dong*	Nonparametric prediction intervals of wind power via linear programming. IEEE Transactions on Power Systems. Vol & pagination not yet available. DOI: 10.1109/TPWRS.2017.2716658
ST6	22	#	2015	Can Wan*, Jian Zhao*, Yonghua Song*, Zhao Xu*, Jin Lin* & Zechun Hu*	Photovoltaic and solar power forecasting for smart grid energy management. CSEE J of Power and Energy Systems, 1(4): 38 - 46. DOI: 10.17775/CSEEJPES.2015.00046
ST6	23		2017	Dongxiao Wang, Ke Meng, Xiaodan Gao, Colin Coates & Zhaoyang Dong	Optimal air-conditioning load control in distribution network with intermittent renewables. J of Modern Power Systems and Clean Energy, 5(1): 55 - 65. DOI: 10.1007/s40565-016-0254-z
ST6	24	#	2016	Huaizhi Wang, Haofan Lin, Tao Yu, Zhao Xu* & Yateendra Mishra	Dynamic equivalent-based reliability evaluation of distribution systems with DGs. IET Generation, Transmission & Distribution, 10(10): 2285 – 94. DOI: 10.1049/iet-gtd.2015.0669
ST6	25	#	2017	Xuetao Xing, Jin Lin, Can Wan* & Yonghua Song	Model predictive control of LPC-looped active distribution network with high penetration of distributed generation. IEEE Transactions on Sustainable Energy, 8(3): 1051 - 63. DOI: 10.1109/TSTE.2016.2647259
ST6	26	#	2016	Tao Yu*, Lei Xi*, Bo Yang*, Zhao Xu* & Lin Jiang*	Multiagent stochastic dynamic game for smart generation control. J of Energy Engineering, 142(1). DOI: 10.1061/(ASCE)EY.1943-7897.0000275
ST6	27	#	2016	Feng Zhang, Zhao Xu* & Ke Meng	Optimal sizing of substation-scale energy storage station considering seasonal variations in wind energy. IET Generation, Transmission & Distribution, 10(13): 3241 – 50. DOI: 10.1049/iet-gtd.2016.0012

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ST6	28	#	2015	Yu Zheng*, Zhaoyang Dong*, Shilin Huang, Ke Meng*, Fengji Luo*, Jie Huang* & David Hill*	Optimal integration of mobile battery energy storage in distribution system with renewables. J of Modern Power Systems and Clean Energy, 3(4): 589 - 96. DOI: 10.1007/s40565-015-0134-y