

Publications (recent 5 years)

1. Hsin-Hsiang Huang, Yen-Chen Shih, Leeyih Wang* and King-Fu Lin* (2019) “Boosting the ultra-stable unencapsulated perovskite solar cells by using montmorillonite/ $\text{CH}_3\text{NH}_3\text{PbI}_3$ nanocomposite as photoactive layer” *Energy Environ. Sci.*, in press. (DOI: 10.1039/c8ee02958j)
2. Shih-Wei Lee, Shih-Hsuan Chien, Jyh-Chien Chen*, Shih-Hao Wang, Leeyih Wang, Bo-Han Lai, and Chien-Lung Wang (2019) “Synthesis and characterization of heterocyclic conjugated polymers containing planar benzo[c]cinnoline and tetraazapyrene structures for organic field-effect transistor application” *Org. Electro.*, 66, 136-147.
3. Yen-Chen Shih, Leeyih Wang*, Hsiao-Chi Hsieh, and King-Fu Lin* (2018) “Effect of fullerene passivation on the charging and discharging behavior of perovskite solar cells: Reduction of bound charges and ion accumulation” *ACS Appl. Mater. Interfaces*, 10, 11722-11731.
4. Hsiao-Chi Hsieh, Chuen-Yo Hsiow, King-Fu Lin*, Yen-Chen Shih, Leeyih Wang*, Cedric Renaud, and Thien-Phap Nguyen* (2018) “Analysis of defects and traps in N-I-P layered-structure of perovskite solar cells by charge-based deep level transient” *J. Phys. Chem. C*, 122, 17601-17611.
5. Jiun-Haw Lee*, Chia-Hsun Chen, Bo-Yen Lin, Yen-Chen Shih, King-Fu Lin, Leeyih Wang, Tien-Lung Chiu and Chi-Feng Lin (2018) “Effect of trapped electrons on the transient current density and luminance of organic light-emitting diode” *J. Phys. D: Appl. Phys.* 51 144003.
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7. Chun-Yu Chang, Chieh-Ping Wang, Rathinam Raja, Leeyih Wang, Cheng-Si Tsao and Wei-Fang Su* (2018) “High-efficiency bulk heterojunction perovskite solar cell fabricated by one-step solution process using single solvent: synthesis and characterization of material and film formation mechanism” *J. Mater. Chem. A*, 6, 4179–4188.
8. Yu-Ping Lee, Chi-Ju Chiang, Pin-Chia Jen, Bo-Ting Chou, Leeyih Wang; Yao-Yi Cheng, Yi-Huan Lee, Yi-Fan Chen, Chih-Chen Hsieh, Chi-An Dai* (2018) “Synergistic in situ hybrid synthesis of highly crystalline P3HT/ZnO nanowires at elevated pressures” *ACS Appl. Energy Mater.*, 1, 1930-1941.
9. Kumaravel Elavarasan, Chinnusamy Saravanan*, Nagarajan Panneer, Selvam, Yen-Ju Hsieh, Yi-Min Chang, and Leeyih Wang* (2018) “[60]Fullerene-quinoxaline, benzothiadiazole and benzoselenadiazole based dyads for thermally stable polymer solar cells: anchoring of substituent on fullerene with a poly(3-hexylthiophene) polymer chain” *Polym. Int.* 67, 1555–1562.

10. Jiun-Haw Lee, Bo-Yen Lin, Yen-Chen Shih, King-Fu Lin, Leeyih Wang, Tien-Lung Chiu*, and Chi-Feng Lin* (2017) “Increase of current density and luminance in organic light-emitting diode with reverse bias driving” *Org. Electro.*, 48, 330-335.
11. Yen-Ju Hsieh, Yu-Ching Huang, Wei-Shin Liu, Yu-An Su, Cheng-Si Tsao*, Syang-Peng Rwei and Leeyih Wang* (2017) “Insights into the morphological instability of bulk heterojunction PTB7-Th/PCBM solar cells upon high-temperature aging” *ACS Appl. Mater. Interfaces*, 9, 14808–14816.
12. Rathinam Raja*, Shengkai Luo, Chuen-Yo Hsiow, Syang-Peng Rwei and Leeyih Wang* (2017) “Novel two-dimensional conjugated polymer containing fluorinated bithiophene as donor and benzoselenodiazole as acceptor units with vinyl-terthiophene pendants for polymer photovoltaic cells” *Polymers*, 9, 272.
13. Hung-Ju Yen*, Changsheng Shan, Leeyih Wang, Ping Xu, Ming Zhou, Hsing-Lin Wang* (2017) “Development of conjugated polymers for memory device applications,” *Polymers*, 9, 25.
14. Yen-Chen Shih, Yu-Bing Lan, Chia-Shuo Li, Hsiao-Chi Hsieh, Leeyih Wang*, Chih-I Wu, and King-Fu Lin* (2017) “Amino-acid-induced preferential orientation of perovskite crystals for enhancing interfacial charge transfer and photovoltaic performance” *Small*, 13, 1604305.
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16. Chi-Ju Chiang, Yi-Huan Lee, Yu-Ping Lee, Guan-Ting Lin, Ming-Hao Yang, Leeyih Wang, Chih-Chen Hsieh*, and Chi-An Dai* (2016) “One-step in situ hydrothermal fabrication of D/A poly(3-hexylthiophene)/TiO₂ hybrid nanowires and its application in photovoltaic devices” *J. Mater. Chem. A*, 4, 908-919.
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19. Ching Shen, Yi-Huan Lee, Yu-Ping Lee, Chi-Ju Chiang, Fan-Kai Wei, Chia-Hung Wu, Kuo-Chang Kau, Hung-Wei Liu, Chih-Chen Hsieh, Leeyih Wang, Chi-An Dai*, (2016) "Self-organization and phase transformation of all π -conjugated diblock copolymers and its applications in organic solar cells" *React. Funct. Polym.*, 108, 94-102.
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22. Chuen-Yo Hsiow*, Han-Ying Wang, Yu-Hsiang Lin, Rathinam Raja, Syang-Peng Rwei, Wen-Yen Chiu, Chi-An Dai, Leeyih Wang* (2016) "Synthesis and characterization of two-dimensional conjugated polymers incorporating electron-deficient moieties for application in organic photovoltaics" *Polymers*, 8, 382.
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27. Chinnusamy Saravanan, Easwaramoorthi Shanmugam, Chuen-Yo Hsiow; Karen Wang, Michitoshi Hayashi, and Leeyih Wang* (2014) "Benzoselenadiazole fluorescent probes – near IR optical and ratiometric fluorescence sensor for fluoride ion" *Org. Lett.*, 16, 354-357.

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Chi-An Dai* (2014) “A new strategy for co-assembling pi-conjugated polymer/cadmium sulfide hybrids into an efficient charge-transporting nanochannel array by using an all-conjugated diblock copolymer motif”, *J. Mater. Chem. A*, 2, 14600-14612.