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Research and Professional Interests

Organic/organic hybrid semiconductors

Journal Papers

1. J. Y. Lam, J. Y. Chen, P. C. Tsai, Y. T. Hsieh, **C. C. Chueh***, S. H. Tung*, W. C. Chen*, "A Stable, Efficient Textile-based Flexible Perovskite Solar Cell with Improved Washable and Deployable Capabilities for Wearable Device Applications" *RSC Adv.* **2017**, 7, 54361-54368. (IF: 3.257) (SCI)
2. C. C. Shih, C. W. Huang, M. Y. Gao, **C. C. Chueh**, W. C. Chen*, "Multi-State Memristive Behavior in a Light-Emitting Electrochemical Cell", *J. Mater. Chem. C* **2017**, 5, 11421-11428. (IF: 5.312) (SCI)
3. Q. Wang, F. Lin, **C. C. Chueh**, T. Zhao, M. Eslamian, Alex K. Y. Jen*, "Enhancing Efficiency of Perovskite Solar Cells by Reducing Defects through Imidazolium Cation Incorporation" *Mater. Today Energy* **2017**, advanced article. (IF: N/A) (SCI)
4. H. Wang, H. Zhang, **C. C. Chueh**, T. Zhao, C. Y. Mao, W. Chen*, Alex K. Y. Jen*, "Enhanced Crystallization and Performance of Formamidinium Lead Triiodide Perovskite Solar Cells through PbI_2 - SrCl_2 Modulation" *Mater. Today Energy* **2017**, advanced article. (IF: N/A) (SCI)
5. A. Rajagopal, P. W. Liang, **C. C. Chueh**, Zhibin Yang, and Alex K.-Y. Jen*, "Defect Passivation via a Graded Fullerene Heterojunction in Low Bandgap Pb-Sn Binary Perovskite Photovoltaics" *ACS Energy Letter* **2017**, 2, 2531-2539. (IF: N/A) (SCI)
6. E. Ercan, J. Y. Chen, P. C. Tsai, J. Y. Lam, S. C.-W. Huang, **C. C. Chueh***, W. C. Chen*, "A Redox-Based Resistive Switching Memory Device Consisting of Organic-Inorganic Hybrid Perovskite/Polymer Composite Thin Film" *Adv. Electron. Mater.* **2017**, 3, 1700344. (IF: 4.193) (SCI)
7. Q. Wang, **C. C. Chueh**, T. Zhao, M. Eslamian*, W. C. H. Choy, Alex K. Y. Jen*, "Effects of Self-Assembling Monolayer Modification of NiOx Nanoparticles Layer on the Performance of Inverted Perovskite Solar Cells and Application in High Power-Per-Weight Devices" *ChemSusChem* **2017**, 10, 3794-3803. (IF: 7.226) (SCI)
8. Y. Y. Yu,* C. H. Chen, **C. C. Chueh**, C. Y. Chiang, C. P. Chen*, W. C. Chen*, "Intrinsically Stretchable Nanostructured Silver Electrodes for Realizing Efficient Strain Sensors and Stretchable Organic Photovoltaics" *ACS Appl. Mater. Interfaces.* **2017**, 9, 27853-27862. (IF: 7.823) (SCI)
9. J. Yu, Y. Xi, **C. C. Chueh***, J. Q. Xu, H. Zhong, F. Lin, S. B. Jo, L. D. Pozzo, W. Tang*, Alex K. Y. Jen*, "Boosting Performance of Inverted Organic Solar Cells by Using a Planar Coronene Based Electron-Transporting Layers" *Nano Energy* **2017**, 39, 454-460. (IF: 12.924) (SCI)

10. N. Li, Z. L. Zhu, Q. S. Dong, J. W. Li, Z. L. Yang, **C. C. Chueh**, Alex K. Y. Jen*, L. D. Wang*, Enhanced Moisture Stability of Cesium-containing Compositional Perovskites by a Feasible Interfacial Engineering”, *Adv. Mater. Inter.* **2017**, 4, 1700598. (IF: 4.302) (SCI)
11. B. Xu, Z. L. Zhu, J. B. Zhang, H. B. Liu, **C. C. Chueh**, X. S. Li, Alex K. Y. Jen*, “4-tert-Butylpyridine Free Organic Hole Transporting Materials for Stable and Efficient Planar Perovskite Solar Cells”, *Adv. Energy Mater.* **2017**, 7, 1700683. (IF: 16.457) (SCI)
12. J. Y. Chen, Y. C. Chiu,* Y. T. Lee, **C. C. Chueh**, W. C. Chen*. “Non-Volatile Perovskite-based Photomemory with a Multi-Level Memory Behavior”, *Adv. Mater.* **2017**, 29, 1702217. (IF: 19.615) (SCI)
13. Y. Wang, Z. L. Zhu, **C. C. Chueh**, Alex K. Y. Jen*, Y. Chi*, “Spiro-Phenylpyrazole-9,9'-Thioxanthene Analogues as Hole-Transporting Materials for Efficient Planar Perovskite Solar Cells”, *Adv. Energy Mater.* **2017**, 7, 1700823. (IF: 16.457) (SCI)
14. X. B. Xu, **C. C. Chueh**, P. F. Jing, Z. B. Yang, X. L. Shi, T. Zhao, L. Y. Lin, Alex K. Y. Jen*, “High Performance Near-IR Photodetector Using Low-Bandgap MA0.5FA0.5Pb0.5Sn0.5I3 Perovskite”, *Adv. Funct. Mater.* **2017**, 27, 1701053. (IF: 12.362) (SCI)
15. S. T. Williams, A. Rajagopal, S. B. Jo, **C. C. Chueh**, T. F. L. Tang, A. Kraeger, Alex K. Y. Jen*, “Realizing a New Class of Hybrid Organic-Inorganic Multifunctional Perovskite”, *J. Mater. Chem. A* **2017**, 5, 10640-10650. (IF: 8.824) (SCI)
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18. J. Y. Chen, **C. C. Chueh**, Z. L. Zhu, W. C. Chen*, Alex K. Y. Jen*, “Low-Temperature Electrodeposited Crystalline SnO₂ as an Efficient Electron-Transporting Layer for Conventional Perovskite Solar Cells”, *Sol. Energ. Mat. Sol. Cells* **2017**, 164, 47-55. (IF: 4.799) (SCI)
19. H. Zhang, H. Wang, S. T. Williams, D. Xiong, W. Zhang, **C. C. Chueh**, W. Chen*, Alex K. Y. Jen*, “SrCl₂ Derived Perovskite Facilitating a High Efficiency of 16% in Hole-Conductor-Free Fully Printable Mesoscopic Perovskite Solar Cells”, *Adv. Mater.* **2017**, 29, 1606608. (IF: 19.615) (SCI)
20. **C. C. Chueh**, C. Z. Li, F. Z. Ding, Z. Li, N. Cernetic, X. S. Li, Alex K. Y. Jen*, “Doping Versatile n-Type Organic Semiconductors via Room-Temperature Solution-Processable Anionic Dopants”, *ACS Appl. Mater. Interfaces.* **2017**, 9, 1136-1144. (IF: 7.823) (SCI)
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 24. X. Liu, Z. Yang, **C. C. Chueh**, A. Rajagopal, S. T. Williams, Y. Sun, Alex K. Y. Jen*, “Improved Efficiency and Stability of Pb-Sn Binary Perovskite Solar Cells by Cs Substitution”, *J. Mater. Chem. A.* **2016**, 4, 17939-17945. (IF: 8.824) (SCI)
 25. X. L. F. Lin, **C. C. Chueh***, Q. Chen, T. Zhao, P. W. Liang, Z. L. Zhu, Y. Sun, Alex K. Y. Jen*, “Fluoroalkyl-Substituted Fullerene/Perovskite Heterojunction for Efficient and Ambient Stable Perovskite Solar Cells”, *Nano Energy* **2016**, 30, 417-425. (IF: 12.924) (SCI)
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