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PUBLICATIONS:

Articles in peer-reviewed journals

(2017~now; only list paper with *corresponding author)

- (1) K. Jiang, S.-H. Hong, S.-H. Tung, **C.-L. Liu**,* “Effects of cation size on thermoelectricity of PEDOT:PSS/ionic liquid hybrid films for wearable thermoelectric generator application”, *J. Mater. Chem. A*, **2022**, 10, 18792-18802.
- (2) S. N. Afraj, C.-C. Lin, A. Velusamy, C.-H. Cho, H.-Y. Liu, J. Chen, G.-H. Lee, J.-C. Fu, J.-S. Ni, S.-H. Tung, S. Yau, **C.-L. Liu**,* M.-C. Chen,* A. Facchetti,* “Heteroalkyl-Substitution in Molecular Organic Semiconductors. Chalcogen Effect on Crystallography, Conformational Lock and Charge Transport”, *Adv. Funct. Mater.*, **2022**, 32, 2200880.
- (3) C.-C. Lin, A. Velusamy, M.-C. Chen,* **C.-L. Liu**,* “Tunable Photoelectric Properties of n-Type Semiconducting Polymer:Small Molecule Blends for Red Light Sensing Phototransistors”, *Adv. Opt. Mater.*, **2022**, 10, 2102650.
- (4) T.-W. Chen, S. N. Afraj, S.-H. Hong, L.-H. Chou, A. Velusamy, C.-Y. Chen, Y. Ezhumalai, S.-H. Yang, I. Osaka, X.-F. Wang, M.-C. Chen,* **C.-L. Liu**,* “Synergetic Effect on Enhanced Photovoltaic Performance of Spray-Coated Perovskite Solar Cells Enabled by Additive Doping and Antisolvent Additive Spraying Treatment”, *ACS Appl. Energy Mater.*, **2022**, 5, 4149-4158. (featured as supplementary cover page)
- (5) L.-H. Chou, **C.-L. Liu**,* “Progress in Spray-Coated Perovskite Films for Solar Cell Applications”, *Solar RRL* **2022**, 6, 2101035.
- (6) A. Velusamy, Y.-C. Yang, C.-C. Lin, S. N. Afraj, K. Jiang, P.-S. Chen, S.-L. Yau, I. Osaka, S.-H. Tung, M.-C. Chen,* **C.-L. Liu**,* “Solution Processable Pentafluorophenyl End-capped Dithienothiophene (DTTR) Organic Semiconductors for Hole-Transporting Organic Field Effect Transistors”, *Adv. Electron. Mater.*, **2022**, 8, 2100648.
- (7) S.-H. Tang, A. Venault, L.-H. Chou, D.-H. Lan, G. V. Dizon, C. Hsieh, C.-C. Yeh, **C.-L. Liu**,* Y. Chang,* “Surface PEGylation via Ultrasonic Spray Deposition for the Biofouling Mitigation of Biomedical Interfaces”, *ACS Appl. Bio Mater.*, **2022**, 5, 225-234.
- (8) S.-H. Hong, S. N. Afraj, P.-Y. Huang, Y.-Z. Yeh, S.-H. Tung, M.-C. Chen, **C.-L. Liu**,* “Photoelectric Effect of Hybrid Ultraviolet-Sensitized Phototransistors from an N-type Organic Semiconductor and an All-Inorganic Perovskite Quantum Dots Photosensitizer”, *Nanoscale*, **2021**, 13, 20498-20507.
- (9) P.-S. Lin, Y. Shoji, S. N. Afraj, M. Ueda, C.-H. Lin, S. Inagaki, T. Endo, S.-H. Tung, M.-C. Chen,* **C.-L. Liu**,* T. Higashihara,* “Controlled Synthesis of Poly[(3-

- alkylthio)thiophene]s and Their Application to Organic Field-Effect Transistors”, *ACS Appl. Mater. Interfaces*, **2021**, 13, 31898-31909. (featured as supplementary cover page)
- (10) Y.-T. Yu, S.-H. Yang, L.-H. Chou, I. Osaka, X.-F. Wang, **C.-L. Liu**,* “One-Step Spray-Coated All-Inorganic CsPbI₂Br Perovskite Solar Cells”, *ACS Appl. Energy Mater.*, **2021**, 4, 5466-5474. (featured as supplementary cover page)
- (11) L.-H. Chou, Y.-T. Yu, I. Osaka, X.-F. Wang, **C.-L. Liu**,* “Spray Deposition of NiO_x Hole Transport Layer and Perovskite Photoabsorber in Fabrication of Photovoltaic Mini-module”, *J. Power Sources*, **2021**, 491, 229586. L.-H. Chou, Y.-T. Yu, I. Osaka, X.-F. Wang, **C.-L. Liu**,* “Spray Deposition of NiO_x Hole Transport Layer and Perovskite Photoabsorber in Fabrication of Photovoltaic Mini-module”, *J. Power Sources*, **2021**, 491, 229586.
- (12) A.-Z. Guo, L.-H. Chou, S.-H. Yang, D. Wang, X.-F. Wang, I. Osaka, H.-W. Lin, **C.-L. Liu**,* “Multi-Channel Pumped Ultrasonic Spray-Coating for High-Throughput and Scalable Mixed Halide Perovskite Solar Cells”, *Adv. Mater. Interfaces*, **2021**, 8, 2001509. (featured as inside front cover page)
- (13) S. N. Afraj, G.-Y. He, C.-Y. Lin, A. Velusamy, C.-Y. Huang, P.-S. Lin, S. Vegiraju, P.-Y. Huang, J.-S. Ni, S.-L. Yau, S.-H. Tung, T. Minari, **C.-L. Liu**,* M.-C. Chen* “Solution-Processable Multifused Thiophene Small Molecules and Conjugated Polymer Semiconducting Blend for Organic Field Effect Transistor Application”, *Adv. Mater. Technol.*, **2021**, 6, 2001028.
- (14) C.-C. Lin, S. N. Afraj, A. Velusamy, P.-C. Yu, C.-H. Cho, J. Chen, Y.-H. Li, G.-H. Lee, S.-H. Tung, **C.-L. Liu**,* M.-C. Chen,* A. Facchetti,* “A Solution Processable Dithioalkyl Dithienothiophene (DSDTT) Based Small Molecule and Its Blends for High Performance Organic Field Effect Transistors”, *ACS Nano*, **2021**, 15, 727-738.
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- (16) V. Joseph, C.-H. Yu, C.-C. Lin, W.-C. Lien, H.-C. Tsai, C.-S. Chen, A. A. A. Torimtubun, A. Velusamy, P.-Y. Huang, G.-H. Lee, S.-L. Yau, S.-H. Tung, T. Minari, **C.-L. Liu**,* M.-C. Chen,* “Quinoidal thioalkyl-substituted bithiophene small molecule semiconductor for n-type organic field effect transistors”, *J. Mater. Chem. C*, **2020**, 8, 15450-15458.
- (17) L.-H. Chou, Y.-T. Yu, X.-F. Wang, I. Osaka, C.-G. Wu, **C.-L. Liu**,* “Sequential Ultrasonic Spray Coating Planar Three Layers for 1-cm² Active Area Inverted Perovskite Solar Cells”, *Energy Tech.*, **2020**, 8, 2000216.
- (18) S. Vegiraju, A. A. A. Torimtubun, P.-S. Lin, H.-C. Tsai, W.-C. Lien, C.-S. Chen, G.-Y. He, C.-Y. Lin, D. Zheng, Y.-F. Huang, Y.-C. Wu, S.-L. Yau, G.-H. Lee, S.-H. Tung, C.-L. Wang, **C.-L. Liu**,* M.-C. Chen,* A. Facchetti,* “Solution Processable Quinoidal

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- (21) L.-H. Chou, Y. Na, C.-H. Park, M. S. Park, I. Osaka, F. S. Kim,* **C.-L. Liu**,* “Semiconducting Small Molecule/Polymer Blends for Organic Transistors”, *Polymer*, **2020**, 191, 122208. (cover image of issue 191c).
- (22) T. Y. Huang, C.-H. Chen, C.-C. Lin, T. Chang, **C.-L. Liu**,* G. S. Liou,* “UV-sensing Organic Phototransistor Memory Devices with a Doped Organic Polymer Electret Composed of Triphenylamine-Based Aggregation-Induced Emission Luminogens”, *J. Mater. Chem. C*, **2019**, 7, 11014-11021.
- (23) Y.-S. Chou, L.-H. Chou, A.-Z. Guo, X.-F. Wang, I. Osaka, C.-G. Wu, **C.-L. Liu**,* “Ultrasonic Spray-Coated Mixed Cation Perovskite Films and Solar Cells”, *ACS Sustainable Chem. Eng.*, **2019**, 7, 14217-14224.
- (24) G. Zhang, Y.-J. Lee, P. Gautum, C.-C. Lin, **C.-L. Liu**,* and J. M. W. Chan,* “Pentafluorosulfanylated Polymers as Electrets in Nonvolatile Organic Field-Effect Transistor Memory Devices”, *J. Mater. Chem. C*, **2019**, 7, 7865-7871 (paper featured as issue cover page).
- (25) L.-H. Chou, X.-F. Wang, I. Osaka, C.-G. Wu, **C.-L. Liu**,* “Scalable Ultrasonic Spray Processing Technique for Manufacturing Large-Area CH₃NH₃PbI₃ Perovskite Solar Cells”, *ACS Appl. Mater. Interfaces*, **2018**, 10, 38042-38050.
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- (29) S.-W. Cheng, T. Han, T.-Y. Huang, Y.-H. Chang Chien, **C.-L. Liu**,* B. Z. Tong,* G.-S.

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- (32) B.-Y. Jiang, S. Vegiraju, A. S. T. Chiang, M.-C. Chen,* **C.-L. Liu**,* “Low-voltage-driven Organic Phototransistors Based on a Solution-processed Organic Semiconductor Channel and High *k* Hybrid Gate Dielectric”, *J. Mater. Chem. C*, **2017**, 5, 9838-9842.
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- (37) W.-C. Chang, D.-H. Lan, K.-M. Lee, X.-F. Wang, **C.-L. Liu**,* “Controlled Deposition and Performance Optimization of Perovskite Solar Cells Using Ultrasonic Spray-Coating Photoactive Layers”, *ChemSusChem*. **2017**, 10, 1405-1412. (paper featured as issue cover page)

Book chapter

- (1) J.-Y. Chen, **C.-L. Liu**,* (2019) “Organic Field-Effect Transistors for Flexible Electronics Application”, *Flexible and Stretchable Electronics: Materials, Design, and Devices*”, Chap 1 in *Flexible and Stretchable Electronics: Materials, Design, and Devices*, ed. by R.-W. Li

and G. Liu, Jenny Standard Publishing, Singapore, pp. 1-32. (ISBN: 978-981-4800-46-4)