Stanford

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Bio

PROFESSIONAL EDUCATION

- Doctor of Philosophy, National Taiwan University (2015)

STANFORD ADVISORS

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Publications

PUBLICATIONS

- **Intrinsically Stretchable Temperature Sensor Based on Organic Thin-Film Transistors** *IEEE ELECTRON DEVICE LETTERS*
  Zhu, C., Wu, H., Nyikayaramba, G., Bao, Z., Murmann, B.
  2019; 40 (10): 1630–33
- **An Intrinsically Stretchable High-Performance Polymer Semiconductor with Low Crystallinity** *ADVANCED FUNCTIONAL MATERIALS*
  Zheng, Y., Wang, G., Kang, J., Nikolka, M., Wu, H., Tran, H., Zhang, S., Yan, H., Chen, H., Yuen, P., Mun, J., Dauskardt, R. H., McCulloch, et al
  2019
- **Tuning the Cross-Linker Crystallinity of a Stretchable Polymer Semiconductor** *CHEMISTRY OF MATERIALS*
  Wang, G., Zheng, Y., Zhang, S., Kang, J., Wu, H., Gasperini, A., Zhang, H., Gu, X., Bao, Z.
  2019; 31 (17): 6465–75
- **High-Transconductance Stretchable Transistors Achieved by Controlled Gold Microcrack Morphology** *ADVANCED ELECTRONIC MATERIALS*
  Matsuhisa, N., Jiang, Y., Liu, Z., Chen, G., Wan, C., Kim, Y., Kang, J., Tran, H., Wu, H., You, I., Bao, Z., Chen, X.
  2019; 5 (8)
- **Multi-scale ordering in highly stretchable polymer semiconducting films** *NATURE MATERIALS*
  Xu, J., Wu, H., Zhu, C., Ehrlich, A., Shaw, L., Nikolka, M., Wang, S., Molina-Lopez, F., Gu, X., Luo, S., Zhou, D., Kim, Y., Wang, et al
  2019; 18 (6): 594-+
- **Characterization of Hydrogen Bonding Formation and Breaking in Semiconducting Polymers under Mechanical Strain** *MACROMOLECULES*
  Gasperini, A., Wang, G., Molina-Lopez, F., Wu, H., Lopez, J., Xu, J., Luo, S., Zhou, D., Xue, G., Tok, J., Bao, Z.
  2019; 52 (6): 2476–86
- **Conjugated Carbon Cyclic Nanorings as Additives for Intrinsically Stretchable Semiconducting Polymers.** *Advanced materials (Deerfield Beach, Fla.)*
  Mun, J., Kang, J., Zheng, Y., Luo, S., Wu, H. C., Matsuhisa, N., Xu, J., Wang, G. N., Yun, Y., Xue, G., Tok, J. B., Bao, Z.
  2019: e1903912
- **Synthesis and Properties of Soluble Fused Thiophene Diketopyrrolopyrrole-Based Polymers with Tunable Molecular Weight** *MACROMOLECULES*
  Niu, W., Wu, H., Matthews, J. R., Tandia, A., Li, Y., Wallace, A. L., Kim, J., Wang, H., Li, X., Mehrotra, K., Bao, Z., He, M.
  2018; 51 (23): 9422–29
- **Effect of Nonconjugated Spacers on Mechanical Properties of Semiconducting Polymers for Stretchable Transistors** *ADVANCED FUNCTIONAL MATERIALS*
  Mun, J., Wang, G., Oh, J., Katsumata, T., Lee, F. L., Kang, J., Wu, H., Lissel, F., Rondeau-Gagne, S., Tok, J., Bao, Z.
  2018; 28 (43)

- **Enhanced Charge Transport and Stability Conferred by Iron(III)-Coordination in a Conjugated Polymer Thin-Film Transistors** *ADVANCED ELECTRONIC MATERIALS*
  Wu, H., Rondeau-Gagne, S., Chiu, Y., Lissel, F., To, J. F., Tsao, Y., Oh, J., Tang, B., Chen, W., Tok, J., Bao, Z.
  2018; 4 (9)

- **Efficient and UV-stable perovskite solar cells enabled by side chain-engineered polymeric hole-transporting layers** *JOURNAL OF MATERIALS CHEMISTRY A*
  Tsai, C., Li, N., Lee, C., Wu, H., Zhu, Z., Wang, L., Chen, W., Yan, H., Chueh, C.
  2018; 6 (27): 12999–3004

- **Nonhalogenated Solvent Processable and Printable High-Performance Polymer Semiconductor Enabled by Isomeric Nonconjugated Flexible Linkers** *MACROMOLECULES*
  Wang, G., Molina-Lopez, F., Zhang, H., Xu, J., Wu, H., Lopez, J., Shaw, L., Mun, J., Zhang, Q., Wang, S., Ehrlich, A., Bao, Z.
  2018; 51 (13): 4976–85

- **Enhancing Molecular Alignment and Charge Transport of Solution-Sheared Semiconducting Polymer Films by the Electrical-Blade Effect** *ADVANCED ELECTRONIC MATERIALS*
  Molina-Lopez, F., Wu, H., Wang, G., Yan, H., Shaw, L., Xu, J., Toney, M. F., Bao, Z.
  2018; 4 (7)

- **Quadruple H-Bonding Cross-Linked Supramolecular Polymeric Materials as Substrates for Stretchable, Antitearing, and Self-Healable Thin Film Electrodes** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Yan, X., Liu, Z., Zhang, Q., Lopez, J., Wang, H., Wu, H., Niu, S., Yan, H., Wang, S., Lei, T., Li, J., Qi, D., Huang, et al
  2018; 140 (15): 5280–89

- **Deformable Organic Nanowire Field-Effect Transistors** *ADVANCED MATERIALS*
  Lee, Y., Oh, J., Kim, T., Gu, X., Kim, Y., Wang, G., Wu, H., Pfattner, R., To, J. F., Katsumata, T., Son, D., Kang, J., Matthews, et al
  2018; 30 (7)

- **Soft Poly(butyl acrylate) Side Chains toward Intrinsically Stretchable Polymeric Semiconductors for Field-Effect Transistor Applications** *MACROMOLECULES*
  Wen, H., Wu, H., Aimi, J., Hung, C., Chiang, Y., Kuo, C., Chen, W.
  2017; 50 (13): 4982–92

- **n-Type Doped Conjugated Polymer for Nonvolatile Memory.** *Advanced materials*
  Lee, W., Wu, H., Lu, C., Naab, B. D., Chen, W., Bao, Z.
  2017

- **Isoindigo-Based Semiconducting Polymers Using Carbosilane Side Chains for High Performance Stretchable Field-Effect Transistors** *MACROMOLECULES*
  Wu, H., Hung, C., Hong, C., Sun, H., Wang, J., Yamashita, G., Higashihara, T., Chen, W.
  2016; 49 (22): 8540–48

- **Significance of the double-layer capacitor effect in polar rubbery dielectrics and exceptionally stable low-voltage high transconductance organic transistors** *SCIENTIFIC REPORTS*
  Wang, C., Lee, W., Kong, D., Pfattner, R., Schweicher, G., Nakajima, R., Lu, C., Mei, J., Lee, T. H., Wu, H., Lopez, J., Diao, Y., Gu, et al
  2015; 5

- **Effect of Spacer Length of Siloxane-Terminated Side Chains on Charge Transport in Isoindigo-Based Polymer Semiconductor Thin Films** *ADVANCED FUNCTIONAL MATERIALS*
  Mei, J., Wu, H., Diao, Y., Appleton, A., Wang, H., Zhou, Y., Lee, W., Kurosawa, T., Chen, W., Bao, Z.
  2015; 25 (23): 3455-3462

- **A Rapid and Facile Soft Contact Lamination Method: Evaluation of Polymer Semiconductors for Stretchable Transistors** *CHEMISTRY OF MATERIALS*
  Wu, H., Benight, S. J., Chortos, A., Lee, W., Mei, J., To, J. W., Lu, C., He, M., Tok, J. B., Chen, W., Bao, Z.
  2014; 26 (15): 4544-4551