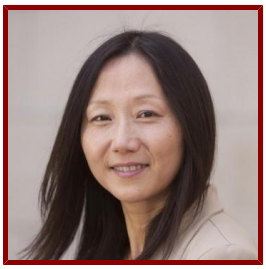
Stanford



Zhenan Bao

LCY: K. K. Lee Professor, Senior Fellow at the Precourt Institute for Energy and Professor, by courtesy, of Materials Science and Engineering, of Chemistry, and of Bioengineering

Chemical Engineering

Curriculum Vitae available Online

CONTACT INFORMATION

- **Administrative Contact**

  Ena Luis - Lab program coordinator

  Email enaluis@stanford.edu

Bio

BIO

Zhenan Bao joined Stanford University in 2004. She is currently a LCY: K.K. Lee Professor in Chemical Engineering, and with courtesy appointments in Chemistry, Bioengineering and Material Science and Engineering. She was the Department Chair of Chemical Engineering from 2018-2022 and in 2025. She founded the Stanford Wearable Electronics Initiative (eWEAR) and is the current faculty director. Bao received her Ph.D. degree in Chemistry from The University of Chicago in 1995 and joined Bell Labs, Lucent Technologies. She became a Distinguished Member of Technical Staff in 2001. Professor Bao currently has more than 800 refereed publications and more than 100 US patents with a Google Scholar H-index 245.

Bao is a member of the US National Academy of Sciences, National Academy of Engineering, the American Academy of Arts and Sciences and the National Academy of Inventors. Bao was elected a foreign member of the Chinese Academy of Science in 2021. She is a Fellow of AAAS, ACS, MRS, SPIE, ACS POLY and ACS PMSE.

Bao is a member of the Board of Directors for the Camille and Dreyfus Foundation from 2022. She served as a member of Executive Board of Directors for the Materials Research Society and Executive Committee Member for the Polymer Materials Science and Engineering division of the American Chemical Society. She co-founded C3 Nano Co. (acquired by Du Pont) and PyrAmes, which have produced products used in commercial smartphones and hospitals, respectively. Multiple inventions from her lab have been licensed and served as foundational technologies for several additional start-ups.

Bao was a recipient of the VinFuture Prize Female Innovator 2022, ACS Award of Chemistry of Materials 2022, MRS Mid-Career Award in 2021, AICHE Alpha Chi Sigma Award 2021, ACS Central Science Disruptor and Innovator Prize in 2020, ACS Gibbs Medal in 2020, the Wilhelm Exner Medal from the Austrian Federal Minister of Science in 2018, the L'Oreal UNESCO Women in Science Award North America Laureate in 2017. She was awarded the ACS Applied Polymer Science Award in 2017, ACS Creative Polymer Chemistry Award in 2013 ACS Cope Scholar Award in 2011. She is a recipient of the Royal Society of Chemistry Beilby Medal and Prize in 2009, IUPAC Creativity in Applied Polymer Science Prize in 2008.

In Stanford, Bao has pioneered molecular design concepts and fabrication processes to advance the scope and applications of skin-inspired electronics. Her group discovered nano confinement effect of conjugated polymers in polymer blends, which established the fundamental foundation for skin-inspired

electronic materials and devices. Her work has resulted in new materials and device solutions for soft robotics, wearable and implantable electronics for precision health, precision mental health and advanced tools for understanding neuroscience and treatment of neurodegenerative diseases. Building on chemical insights, her group has developed foundational materials and devices that enabled a new generation of skin-inspired soft electronics. They provide unprecedented opportunities for understanding human health through developing monitoring, diagnosis and treatment tools. Some examples include: a neuromorphic e-skin that can sense force and temperature and directly communicate with brain, a wireless wound healing patch, a soft NeuroString for simultaneous neurochemical monitoring in the brain and gut, soft high-density electrophysiological recording array, a meta-learned skin sensor for detailed body movements, a reconfigurable self-healing electronic skin.

ACADEMIC APPOINTMENTS

- Professor, Chemical Engineering
- Senior Fellow, Precourt Institute for Energy
- Professor (By courtesy), Materials Science and Engineering
- Professor (By courtesy), Chemistry
- Professor (By courtesy), Bioengineering
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Affiliate, Precourt Institute for Energy
- Faculty Fellow, Sarafan ChEM-H
- Affiliate, Stanford Woods Institute for the Environment
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Department Chair, Stanford University, (2025- present)
- Co-chair, Taiwan Science and Technology Hub @ Stanford, (2023- present)
- Department Chair, Stanford University Department of Chemical Engineering, (2018-2022)
- Director, Stanford Wearable Electronics Initiative (eWEAR), (2016- present)

HONORS AND AWARDS

- ETH Medal of Chemical Engineering, Eidgenössische Technische Hochschule Zürich (2025)
- Outstanding Asian American Women who Dared Award, One World Foundation and China Institute (2025)
- ACS Kavli Lecture Award Innovation in Chemistry, American Chemical Society (2024)
- Faculty Women’s Forum (FWF) Outstanding Leader Award, Stanford University (2024)
- Fellow, Asian American Academy of Science and Engineering (AAASE) (2024)
- Member, National Academy of Science, National Academy of Sciences (2024)
- Innovation Investigator, Arc Institute (2023)
- Samsung Research Award, Samsung Electronics (2023)
- ACS Award of Chemistry of Materials, American Chemical Society (2022)
- ACS Outstanding Global Mentor Award in Polymer Science and Engineering, American Chemical Society (2022)
- Fellow, Royal Chemical Society (2022)

- Honorary Member, Chinese Chemical Society (2022)
- Investigator, CZ BioHub (2022)
- Materials Today Innovation Award, Elsevier (2022)
- VinFuture Prize Female Innovator, VinFuture Foundation (2022)
- AICHE Alpha Chi Sigma Award, American Institute of Chemical Engineers (2021)
- Charles G. Overberger International Prize for Excellence Polymer Research, American Chemical Society Polymer Chemistry Division (2021)
- Foreign Member, Chinese Academy of Science (2021)
- MRS Mid-Career Award, Material Research Society (2021)
- Member, American Academy of Arts and Sciences (2021)
- ACS Central Science Disruptors and Innovators Prize, American Chemical Society (2020)
- Gibbs Medal, American Chemical Society (2020)
- ACS Nano Lectureship Award, American Chemical Society (2018)
- Wilhelm Exner Medal, Austrian Federal Minister of Science (2018)
- Applied Polymer Science Award, American Chemical Society (ACS) (2017)
- Member, National Academy of Inventors (2017)
- Women in Science Award, L'Oreal Foundation and UNESCO (2017)
- Member, National Academy of Engineering, National Academy of Engineering (2016)
- ACS POLY Fellow, American Chemical Society (ACS) Polymer Division (POLY) (2014)
- Andreas Acrivos Award for Professional Progress in Chemical Engineering, American Institute of Chemical Engineers (AICHE) (2014)
- MRS Fellow, Materials Research Society (MRS) (2014)
- ACS Polymer Division Carl S. Marvel Creative Polymer Chemistry Award, American Chemical Society (ACS) (2013)
- Honorary Guest Professorship, Soochow University, China (2013)
- AAAS Fellow, American Association for the Advancement of Science (AAAS) (2012)
- Cheung Kong Scholar, Li Ka Shing Foundation and Chinese Ministry of Education (2012)
- Honorary Guest Professorship, Nanjing Industry University, China (2012)
- ACS Fellow, American Chemical Society (ACS) (2011)
- ACS PMSE Fellow, American Chemical Society (ACS) Polymer Science and Engineering (PMSE) division (2011)
- Most influential Chinese in the World, Science and Technology Category, Phoenix TV (2011)
- Honorary Si Yuan Chair Professorship, School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China (2010-2013)
- David Filo and Jerry Yang Faculty Scholar, Stanford University (2009-2012)
- The Royal Society of Chemistry 2009 Beilby Medal and Prize, Stanford University (2009)
- IUPAC Award, Polymer International (2008)
- SPIE Fellow, SPIE (2008)
- 50 Awards in the Innovator category, Nanotech Briefs (2007)
- Featured in Women in SPIE Optics Planner calendar, SPIE (2007)
- Ranked 4 among the Top 20 most cited authors in the field of Organic Thin Film Transistors, ISI (2007)
- Teaching Excellence Award, Stanford Society of Women Engineering (2007)
- Sloan Research Fellowship, Alfred P. Sloan Foundation (2006)
- Du Pont Science and Technology Award, DuPont (2005)

- Finmeccanica Faculty Scholar, Stanford University (2004-2008)
- Terman Fellow, Stanford University (2004-2007)
- Robert Noyce Faculty Scholar, Stanford University (2004-2005)
- 3M Faculty Award, 3M (2004)
- Best Mentor Award, University Relations of Lucent Technologies (2003)
- Top 100 young innovators for this century, MIT Technology Review (2003)
- Team Innovation Award, American Chemical Society (2002)
- Editor's Choice of the "Best of the Best" in new technology, R&D Magazine (2001)
- R&D 100 Award for the work on Printed Plastic Circuits for Electronic Paper Displays, R&D Magazine (2001)
- Top 10 Research Breakthroughs for work on large scale integrated circuits based on organic materials, Science Magazine (2000)
- Top 100 Young Engineers, National Academy of Engineering (2000)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- International Scientific Advisory Board Member, Wallenberg Initiative Material Science for Sustainability (WISE) (2024 - present)
- Scientific Advisory Board Member, CZ Biohub at Chicago (2024 - present)
- Council member, The Stanford Emerging Tech Review, chaired by Condoleezza Rice, Hoover Institution (2023 - present)
- Board of Directors, Camille and Henry Dreyfus Fondation (2022 - present)
- Advisory Council Member, Pritzker School of Molecular Engineering, University of Chicago (2022 - 2025)
- Advisor, Science For America (2022 - 2023)
- Program Chair, US-China National Academy of Engineering Frontier of Engineering Symposium (2019 - 2019)
- Board of Directors, co-founder, PyrAmes (2018 - present)
- Scientific Advisory Board Member, Beijing Institute for Collaborative Innovation (2018 - 2022)
- Science Committee Member, Future Prize of China (2018 - 2021)
- International Advisory Board, Accounts Chemical Reviews (2017 - 2022)
- Scientific Advisory Board, Solvay (2017 - 2020)
- International Advisory Board, J. Am. Chem. Soc. (2015 - present)
- International advisory board member, ShanghaiTech, School of Physical Science and Technology (2014 - 2019)
- Associate Editor, Chemical Science (2014 - 2016)
- International Editorial Advisory Board, Materials Horizon (2013 - present)
- International Editorial Advisory Board, Advanced Materials (2013 - present)
- International Editorial Advisory Board, Nanoscale (2012 - present)
- International Editorial Advisory Board, Chemical Communications (2012 - present)
- International Editorial Advisory Board, Advanced Energy Materials (2012 - present)
- International Editorial Advisory Board, Nature Asia Materials (2011 - present)
- International Editorial Advisory Board, ACS Nano (2011 - present)
- Board of Directors, co-founder, C3 Nano, Co. (2011 - 2023)
- International advisory board member, LG Display (2010 - 2014)
- Conference Chair, Gordon Research Conference on Electronic Processes in Organic Materials (2010 - 2010)
- Board Member, National Academies Board on Chemical Sciences and Technology (2009 - 2012)
- Executive Committee Member/Member-at-Large, Division of Polymer Materials Science and Engineering, American Chemical Society (2009 - 2012)

- Associate Editor, Synthetic Metals (2009 - 2011)
- International Editorial Advisory Board, Chemistry of Materials (2006 - 2011)
- Scientific Advisory Board Member, Plastic Electronics Foundation (2006 - 2009)
- Associate Editor, Polymer Review (2004 - 2008)
- Board of Directors, Material Research Society (MRS) (2003 - 2005)
- International Editorial Advisory Board, Materials Today (2002 - present)
- Meeting chair, Materials Research Society Spring Meeting (2002 - 2002)
- International Editorial Advisory Board, Advanced Functional Materials (2001 - 2005)
- Executive Committee Member/Member-at-Large, Division of Polymer Materials Science and Engineering, American Chemical Society (2000 - 2006)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

PROFESSIONAL EDUCATION

- MS, The University of Chicago , Chemistry (1993)
- PhD, The University of Chicago , Chemistry (1995)

LINKS

- Bao Research Group: http://baogroup.stanford.edu
- Stanford Wearable Electronics Initiative (eWEAR): http://wearable.stanford.edu

Teaching

COURSES

2026-27

- Polymer Chemistry: CHEMENG 164X, CHEMENG 464 (Win)

2025-26

- Micro and Nano Processing Technologies for Medical Electronics: BIOE 274, CHEMENG 247, CHEMENG 447 (Win)

2024-25

- Polymer Chemistry: CHEMENG 464 (Win)

2023-24

- Graduate Practical Training: CHEMENG 299 (Sum)
- Micro and Nanoscale Fabrication Engineering: CHEMENG 140X, CHEMENG 440 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Tony Dong, Luna Hwang, Philip Onffroy, Sophia Shen

Postdoctoral Faculty Sponsor

Jaeyong Ahn, Ke Chen, Lili Chen, Tianhao Chen, Abdul Dar, Xuelin Guo, Zihan He, Kuang Jung Hsu, Sanghyun Jeon, Suhan Kim, Hyukmin Kweon, Qifan Li, Alam Mahmud, Yuya Nishio, Dongho Park, Jungjae Park, Yi Qiang, Hao Sheng, Jiuyun Shi, Lukas Sporrer, Zehao Sun, Shiyuan Wei, Cel Welch, Ruiheng Wu, Matthias Wurdack, Changhao Xu, Peyton Young, Xintong Yuan, Fangyuan Zhang, Junyi Zhao, Yepin Zhao

Doctoral Dissertation Advisor (AC)

Jacob Florian, Michal Gala, Jinhyeong Kim, Carina Yi Jing Lim, Kelly Liu, Bronte McKinnis, Alexis Medina, Luca Mondonico, Rachael Mow, Alexandra Ramos Figueroa, Max Schrock, Baiyu Shi, Yuran Shi, Wilson Turner, Diego Uruchurtu Patino, Chibuike Uwakwe, Yating Yao, Yujia Yuan, Elizabeth Zhang, Spencer Zhao

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Leen Abdul Razzak, Jeffrey Heo, James Licato, Aditya Shah, Evelyn Wong, Tomasz Zaluska

Postdoctoral Research Mentor

Stefano Cestellos Blanco, Xuelin Guo, Zihan He, Shiyuan Wei

Publications

PUBLICATIONS

- **Arginine-specific molecularly imprinted polymer-based laser-induced graphene flexible sensor** *NANO RESEARCH*
  Gao, R., Khatib, M., Hsu, K., Bao, Z.
  2026; 19 (10)
- **A microscopic view of diffusion and failure mechanisms of lithium anodes in solid-state batteries** *ESCIENCE*
  Weckelmann, L., Lyu, H., Yang, H., Tsai, C., Dzieciol, K., Yu, S., Kungl, H., Bao, Z.
  2026; 6 (5)
- **Interfacial Lithium Redox Kinetics Regulated by Solvent Asymmetry and Moment of Inertia in Li Metal Batteries.** *Journal of the American Chemical Society*
  Choi, I. R., Shah, A., Heo, J., Shuchi, S. B., Holoubek, J., Florian, J., Lee, J. K., Lyu, H., Zhang, E., Lee, J. H., Lin, Y., Cui, Y., Qin, et al
  2026; 148 (33): 35293-35306
- **A monolithic fabrication platform for intrinsically stretchable polymer transistors and complementary circuits** *DEVICE*
  Yuan, Y., Zhao, C., Ronchini, M., Nishio, Y., Zhong, D., Wu, C., Kweon, H., Sun, Z., Mow, R. K., Shi, Y., Michalek, L., Wu, H., Liu, et al
  2026; 4 (8)
- **Interfacial LithiumRedox Kinetics Regulated by SolventAsymmetry and Moment of Inertia in Li Metal Batteries** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Choi, I., Shah, A., Heo, J., Shuchi, S., Holoubek, J., Florian, J., Lee, J. K. J., Lyu, H., Zhang, E., Lee, J., Lin, Y., Cui, Y., Qin, et al
  2026
- **Solvent-Mediated Diffusion Enables Directed Functionalization of Polymer Semiconductor Interfaces.** *ACS applied materials & interfaces*
  Schrock, M., Michalek, L., Chen, Q. G., Liu, Q., Mow, R. K., Shi, Y., Bao, Z.
  2026
- **A Skin-Inspired High-κ Self-Healing Polymer for Low-Voltage Dielectric Elastomer Actuators.** *Advanced materials (Deerfield Beach, Fla.)*
  Lai, J. C., Kim, E., Xu, C., Niu, S., Jiang, Y., Zhong, D., Peng, Y., Wang, W., Zhang, Z., Copper, C. B., Gong, H., Yan, H., Lin, et al
  2026: e23659
- **Versatile helicene building blocks for organic electronics.** *Chemical science*
  Mow, R. K., Schuster, N. J., Bao, Z.
  2026
- **Tuning Selectivity of Electrochemical Sensors With Polymer Coatings.** *Advanced materials (Deerfield Beach, Fla.)*
  Weber, I. C., Zosso, Y., Patino, D. U., Rijns, L., Düsselberg, A. L., Bao, Z.
  2026: e74000
- **Redox Staining of Metallic Lithium inside Batteries for Multimodal Visualization and Identification with Multiscale Spatial Resolution.** *Journal of the American Chemical Society*
  Lee, J. H., Lee, J. K., Zhang, P., Holmes, S. E., Zhang, W., Choi, I. R., Kim, S. C., Lee, J., Shuchi, S. B., Kim, M. S., Bao, Z., Chiu, W., Cui, et al
  2026
- **Genetically targeted photocatalytic organic dyes for spatiotemporally controlled organic synthesis in specific living cells.** *Nature chemistry*

Zhao, S., Loh, K. Y., Tyson, J., Kadur, C., Bertozzi, C. R., Deisseroth, K., Bao, Z.
2026

- **Enamine-one vitrimer organogel stretchable electrolytes for sodium-ion transport** *JOURNAL OF MATERIALS CHEMISTRY A*
  Lim, C., Guo, X., Lin, Y., Shi, Y., Wu, R., Bao, Z.
  2026
- **Upcycling Commodity Polymers into Semiconductors by Sequential Grafting of Aromatic Units through Regioselective Iodination and Living Suzuki-Miyaura Catalyst-Transfer Polymerization.** *Journal of the American Chemical Society*
  Zhang, J., Ahn, J., Park, H., Wu, R., Kim, H., Bao, Z., Choi, T. L.
  2026
- **Ultralow-voltage electrochemical organic light-emitting transistors with pinned and wide lateral recombination.** *Nature materials*
  Kim, K. N., Zhou, H., Kim, D. Y., Sung, M. J., Jeong, W. J., Seo, D. G., Park, J., Lee, S., Wu, Y., Lee, Y., Kim, K. K., Park, J., Cheng, et al
  2026
- **Stereoisomeric mixture of a multigram-synthesized helicene assembles swiftly into hierarchical ribbons via supramolecular sheets** *JOURNAL OF MATERIALS CHEMISTRY C*
  Schuster, N. J., Mow, R. K., Lyu, H., Schrock, M., Wu, R., Wu, Y., Zhang, S., Jiang, X., Bao, Z.
  2026
- **Biofunctionalized polymer semiconductors toward soft and stretchable transistor-based biosensors.** *Science advances*
  Zhao, C., Liu, Q., Chang, J. Y., Patil, A., Michalek, L., Wu, Y., Yuan, Y., Mow, R. K., Shi, Y., Yao, Y., Hsu, K. J., Zheng, Y., Bao, et al
  2026; 12 (23): eaec2641
- **Machine Learning-Driven Multiplexed Biomarker Detection with Polymer-Enhanced Electrochemical Sensors** *ACS ELECTROCHEMISTRY*
  Duesselberg, A. L. M., Weber, I. C., Zosso, Y., Salah, P., Bao, Z.
  2026; 2 (6): 1444-1452
- **Spatiochemical Segregation in Porous Lithium-Metal Interphases.** *Journal of the American Chemical Society*
  Yu, W., Lyu, H., Li, D., Lin, K. Y., Florian, J., Cho, Y., Xu, X., Chen, Y., Hao, H., Xu, C., Nordlund, D., Nanda, J., Qin, et al
  2026
- **Solution-state nanoconfined aggregation and microstructure evolution in blends of conjugated polymers and elastomers.** *Proceedings of the National Academy of Sciences of the United States of America*
  Peña-Alcántara, A. E., Ghasemi, M., Cheng, C., Chaney, T. P., Coffey, A. H., Ponte, E., Ji, X., Michalek, L., Wu, Y., Schrock, M., Ngaruka, G., Gala, M. L., Zhu, et al
  2026; 123 (18): e2516186123
- **Intrinsically stretchable complementary circuits based on direct photo-patternable polymer semiconductors** *NATURE ELECTRONICS*
  Liu, Q., Zheng, Y., Wu, H., Michalek, L., Ronchini, M., Mow, R. K., Wang, W., Park, H., Ji, X., Yu, Z., Yao, Z., Nishio, Y., Zhao, et al
  2026
- **Sensitive Hormone and Neurotransmitter Detection with Carbon Flower Electrodes** *ADVANCED FUNCTIONAL MATERIALS*
  Weber, I. C., Patino, D., Hsu, K., Zosso, Y., Dusselberg, A. L. M., Chen, T., Parkatzidis, K., Wei, S., Mahmud, A., Bastide, G. H., Remund, A. L., Wu, M., Bao, et al
  2026
- **Ultrasensitive soft vibration sensors based on atomically thin metal dichalcogenide ribbon networks.** *Science advances*
  Xu, C., Li, X., Michalek, L. F., Park, J., Kim, E., Zhang, Z., Unocic, R. R., Zhao, E. T., Hsu, W. C., Shi, B., Wu, S., Yang, Y., Harutyunyan, et al
  2026; 12 (12): eaeb6733
- **Localized Thermomechanical Measurements of Polymers and Blends with AFM-IR.** *Small (Weinheim an der Bergstrasse, Germany)*
  Lim, C. Y., Bao, Z., Michalek, L.
  2026: e14518
- **Wireless soft implantable pressure sensors based on liquid metal with large-area mapping and adaptive implantation capabilities.** *Proceedings of the National Academy of Sciences of the United States of America*
  Kim, M. G., Yeon, P., Ruth, S. R., Park, J., Lai, J., Zhong, D., Xu, C., Kim, J., Arbabian, A., Fox, P. M., Bao, Z.
  2026; 123 (8): e2528796123

- **Field-Responsive Dynamic Monolayer Regulated Interphase for Enhanced Lithium Metal Batteries.** *Journal of the American Chemical Society*
  Zhang, E., Holoubek, J., Lyu, H., Li, Y., Florian, J., Shuchi, S. B., Lee, J. K., Michalek, L., Chen, T., Chen, Z., Choi, I. R., Guo, X., Mondonico, et al
  2026
- **Temperature-Controlled Phase Separation Behavior of Conjugated Polymer:Elastomer Blends of PffBT4T-2OD and SEBS** *ACS APPLIED ELECTRONIC MATERIALS*
  Pena-Alcantara, A. E., Nikzad, S., Ngaruka, G., Michalek, L., Bao, Z.
  2026
- **Stabilizing All-Solid-State Li-S Batteries by a Polysulfide-Repelling and Anode-Protecting Self-Segregated Trilayer Polymer Electrolyte.** *Journal of the American Chemical Society*
  Lyu, H., Gao, X., Michalek, L., Chen, T., Yu, W., Lim, C. Y., Florian, J., Mondonico, L., Zhang, W., Sarkar, S., Zhang, P., Shi, Y., Lin, et al
  2026
- **Polyacrylonitrile Flower-Like Particles with Tunable Size and Morphology via Scalable Oxygen-Tolerant Polymerization.** *ACS nano*
  Parkatzidis, K., Patino, D. U., Shi, Y., Hsu, K. J., Weber, I., Wang, H. S., Bao, Z.
  2026
- **Simply Fabricatable Reference Electrode for Studying Li Metal Interfaces Operando** *ACS ENERGY LETTERS*
  Florian, J., Lyu, H., Mondonico, L., Zhao, Y., Lee, J. K. J., Musgrove, A. L., Cui, Y., Sacci, R. L., Bao, Z.
  2026
- **A Compact, Elastomeric Multimodal Sensor for Tactile Softness Discrimination** *ADVANCED MATERIALS TECHNOLOGIES*
  Berman, A., Shi, B., Kim, E., Root, S. E., Xu, C., Beker, L., Bao, Z.
  2025
- **A skin-inspired, capacitive array for tactile modulus detection via a scalable rigid-island architecture** *NPJ FLEXIBLE ELECTRONICS*
  Berman, A., Shi, B., Zaluska, T., Yong, A., Clees, S., Xu, C., Beker, L., Bao, Z.
  2025; 10 (1)
- **Supramolecular Nanostructures Enabling Mechanical Reinforcement and Recognitive Self-Healing in Elastomers** *ADVANCED FUNCTIONAL MATERIALS*
  Park, H., Lee, H., Kim, Y., Kim, H., Kim, J., Zhao, E., Figueroa, A., Lee, D., Bao, Z., Kang, J.
  2025
- **Revealing Solvent-Assisted Li+ Transport in the Solid Electrolyte Interphase operando.** *Journal of the American Chemical Society*
  Florian, J., Lyu, H., Choi, I. R., Mondonico, L., Lam, S., Zhao, Y., Kim, M. J., Westover, A., Cui, Y., Sacci, R. L., Bao, Z.
  2025
- **Intrinsically stretchable transistors and integrated circuits** *NATURE REVIEWS ELECTRICAL ENGINEERING*
  Nishio, Y., Zhong, D., Kim, K., Liu, Q., Wu, C., Tok, J., Murmann, B., Bao, Z.
  2025; 2 (11): 715-735
- **A multimodal platform for real-time neurochemical and electrophysiologic monitoring for intraoperative neurosurgical applications.** *Biosensors & bioelectronics*
  Shin, H., Scheitler, K. M., Rojas Cabrera, J. M., Goyal, A., Boesche, J. B., Rusheen, A. E., Yuen, J., Hanna, B., Karanovic, U., Vettleson-Trutza, S., Tang-Cabrera, J., Tsai, S. T., Elgohary, et al
  2025; 293: 118151
- **Mechanism for the Fluctuation in Coulombic Efficiency of Lithium Metal Anodes After Calendar Aging** *ADVANCED ENERGY MATERIALS*
  Zhang, E., Lyu, H., Zhang, W., Chen, Y., Sayavong, P., Choi, I., Cui, Y., Bao, Z.
  2025
- **Skin-like drift-free biosensors with stretchable diode-connected organic field-effect transistors** *NATURE ELECTRONICS*
  Zhao, C., Park, J., Maula, D., Yuan, Y., Zhong, D., Wang, W., Liu, Q., Xu, C., Zheng, Y., Mow, R. K., Jiang, Y., Xu, C., Lyu, et al
  2025
- **Elucidating the Effects of LiF on Lithium Metal Anodes.** *Nano letters*
  Kim, M. S., Wang, J., Zhang, W., Sayavong, P., Zhang, Z., Oyakhire, S. T., Shuchi, S. B., Kim, S. C., Cui, Y., Chen, Y., Yu, Z., Gong, H., Xu, et al
  2025

- **High-density soft bioelectronic fibres for multimodal sensing and stimulation.** *Nature*
  Khatib, M., Zhao, E. T., Wei, S., Park, J., Abramson, A., Bishop, E. S., Thomas, A. L., Chen, C. H., Emengo, P., Xu, C., Hamnett, R., Root, S. E., Yuan, et al
  2025; 645 (8081): 656-664
- **A damage-perceptive, self-healing electronic skin with millimeter resolution** *DEVICE*
  Root, S. E., Wu, C., Choi, H., Sun, E., Ngaruka, G., Park, H., Figueroa, A., Berman, A., Patino, D., Shi, Y., Pugh, C., Bao, Z.
  2025; 3 (8)
- **Titanium-, Nitrogen-Doped Carbon Flowers Catalyze Electrochemical Nitrate Reduction Reaction to Ammonia.** *Journal of the American Chemical Society*
  Liu, M. J., Fernández Otero, C. A., Patino, D. U., Gong, H., Hossain, M. D., Matthews, J. E., Williams, K. S., Vargas, A., Zachman, M. J., Hoffman, A. S., Nordlund, D., Bajdich, M., Bare, et al
  2025
- **Resolving Electrolyte Decomposition Products in Gas, Liquid, and Solid Phases in Lithium-Metal Batteries** *ACS ENERGY LETTERS*
  Cui, Z., Yu, Z., Lyu, H., Bao, Z., Manthiram, A.
  2025
- **Synchronized Breathing in Anion-Derived Interphases** *ACS ENERGY LETTERS*
  Tan, S., Xia, K., Wang, N., Yen, D., Yu, Z., Rahman, M., Chen, X., Chen, Y., Yang, X., Xiao, J., Liu, J., Cui, Y., Bao, et al
  2025
- **Functionalized Adhesive Thin Flexible Electrode Arrays for Large-Scale Unobtrusive Ambulatory Monitoring of Neuromuscular Activity.** *Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual International Conference*
  Razzak, L. A., Bao, Z., Coleman, T. P.
  2025; 2025: 1-5
- **A guide for nanomechanical characterization of soft matter via AFM: From mode selection to data reporting.** *STAR protocols*
  Kim, E., Ramos Figueroa, A. L., Schrock, M., Zhang, E., Newcomb, C. J., Bao, Z., Michalek, L.
  2025; 6 (2): 103809
- **Stabilizing lithium-metal electrodes with polymer coatings** *NATURE ENERGY*
  Huang, Z., Lyu, H., Greenburg, L. C., Cui, Y., Bao, Z.
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