



Yi-Lun Ying is Professor of Analytical Chemistry at the School of Chemistry and co-PI at the Chemistry and Biomedicine Innovation Center, Nanjing University, China. Her research focuses on nanopore electrochemistry for single-molecule analysis, particularly single-molecule reaction measurements and developing intelligent ultrafast electrochemical instrumentation. She received her Ph.D. in Electrochemistry from East China University of Science and Technology and conducted her postdoctoral research on nanoscale spectroelectrochemical biosensors following a doctoral exchange

program at University of Birmingham. Ying started her independent academic career in 2016 and was promoted to full professor at Nanjing University in 2019.

Dr. Ying has co-authored 158 peer-reviewed publications, including papers in *Nat. Chem.*, *Nat. Nanotechnol.*, *J. Am. Chem. Soc.*, and *Angew. Chem. Int. Ed.*, with an h-index of 48. Her work has been recognized by international honors including the L'Oréal-UNESCO International Rising Talents (2016), RSC Analyst Emerging Investigator Lectureship (2021), Young Chemists Award of the Chinese Chemical Society (2022), ACS Rising Star in Measurement Science (2023), and Wiley Small Young Innovator Award (2025). She serves on the Editorial Boards of *ACS Sens.*, *ACS Meas. Sci. Au*, *ChemElectroChem*, and *Sens. Actuators B Chem.*, and as an Advisory Board Member of *Analyst*.

Dr. Ying has delivered 25 keynote/invited lectures at international conferences, including ISE annual meetings as an active member of the ISE since 2017. She has been one of the organizers of the "Nanopore Electrochemistry Weekly Meeting" series since 2020, contributing to more than 250 international online seminars connecting researchers worldwide in electrochemistry, nanoscience and analytical chemistry. She has also served as co-chair for student symposia at the ACS Fall since 2022.

**YI-LUN YING, Ph.D.****Professor of Chemistry****L'Oreal-UNESCO International Rising Talents****Outstanding Young Scholars of NSFC**

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**RESEARCH INTERESTS**

Nanopores, Single-molecule technology, Nanoelectrode, Nanoelectrochemistry, Micro/nanoelectrode array, Intelligent electrochemical instrument

**EDUCATION AND PROFESSIONAL EXPERIENCE**

- 2019 - now **Professor**, Nanjing Univeristy, CHINA  
 2019 - now **Co-PI**, Chemistry and Biomedicine Innovation Center, Nanjing University, CHINA  
 2021 - now **Visiting Professor**, School of Biomedical Engineering, Tohoku University, JAPAN  
 2018 **Visiting Scholar**, Department of Chemistry, University of Warwick, UK  
 2016 - 2019 **Associate Professor**, School of Chemistry and Molecular Engineering, East China University of Science and Technology (ECUST), CHINA  
 2014 - 2016 **Postdoctoral Fellow**, Key Laboratory of Advanced Materials, ECUST, CHINA  
 2009 - 2014 **Ph.D.**, Analytical Chemistry, ECUST, CHINA  
 Under supervision of Professor Yi-Tao Long  
 2014 **Exchange Ph.D. Student**, Nanotechnology, University of Birmingham, UK  
 Under supervision of Professor Jon A. Preece  
 2005 - 2009 **B.Sc.**, Chemistry, ECUST, CHINA

**SELECTED HONORS AND AWARDS**

- 2025 **Wiley Small Young Innovator Awards Award**  
 2023 **American Chemical Society (ACS) "Rising Star in Measurement Science"**  
 2022 **First Prize of Science and Technology Award of China Association for Instrument**  
 2021 **Young Chemists Award of Chinese Chemical Society (CCS)**  
 2020 **Royal Society of Chemistry (RSC) Analyst Emerging Investigator Lectureship Award**  
 2018 **Shanghai Qimingxing Scholar**  
 2016 **L'Oreal-UNESCO International Rising Talents**  
 2015 **Science and Technology Rising Talents of L'Oreal-China Association**

**PUBLIC & PROFESSIONAL SERVICES**

- 2024 - now **Member** of the Analytical Science Community Council, RSC  
 2024 - now **Member** of ACS Shanghai Chapter  
 2024 - now **Editor Board Member** for ACS Journal of **ACS Sensors**  
 2024 - now **Editor Board Member** for Elsevier Journal of **Sensors and Actuator B**  
 2022 - now **Advisory Board Member** for RSC Journal of **Analyst**  
 2021 - now **Editor Board Member** for ACS Journal of **ACS Measurement Science Au**  
 2019 - now **Editor** for Elsevier Journal of **Results in Chemistry**  
 2018 - now **Editor Board Member** for Wiley Journal of **ChemElectroChem**

**RESEARCH GRANTS AS A COORDINATOR**

- 2026 - 2030 **National Science Fundation of China (NSFC) Outstanding Young Scholars**

- “Single-Molecule Reaction with Nanopore Electrochemistry”
- 2025 - 2028 **NSFC General Program** “Asymmetric Nanopore Sequencing of Single Peptides”
- 2023 - 2027 **China’s National Key R&D Project** “Wide-Field Imaging Techniques and Application”
- 2022 - 2024 **Program for High-Level Entrepreneurial and Innovative Talents of Jiangsu Province**
- 2021 - 2023 **German Research Foundation (DFG) - NSFC Mobile Research Programme**  
“Next Generation Nanopore Technology for Biomarker Detection ”
- 2020 - 2022 **NSFC Excellent Young Scholars** “Nanopore Electrode and its Application”
- 2019 - 2022 **NSFC General Program** “Solid-State Nanopore Array for Single Peptide Detection”
- 2019 - 2022 **National Ten Thousand Talent Program for Young Top-Notch Talent**
- 2017 - 2019 **RSC-NSFC Mobility Grant** “Wireless Nanopore Electrode for Single-Cell Analysis”
- 2016 - 2018 **NSFC Young Scientists Fund** “Identification of Single MicroRNA with a Nanopore”

### LASTEST ACADEMIC AND PUBLIC ACTIVITIES

(> 40 invited talks and lectures 2018 – 2026)

- 2022 - 2026 **co-Chair**, ACS Fall - Virtual Graduate Students Symposium in Asia-Pacific Region
- 2020 - now **Secretary**, Nanopore Weekly Meeting (> 300 speakers)
- 2020 **Secretary**, Nanopore Electrochemistry Meeting & Training Workshop
- 2018 **co-Chair**, Nanopore and Nanochannel: Sequencing and Beyond
- 2018 **Secretary**, ACS "International Chemistry Symposium Frontiers in Sensors Innovation"
- Funding Reviewer for ERC, Swiss National Science Foundation, Academy of Medical Sciences and etc..

### SELECTED LAST 5 YEAR’S PUBLICATIONS:

(\*Corresponding author, >130 journal papers, 7 patents; 5 year H-index: 47; citations:>8100)

1. **Y.-L. Ying\***, C.-N. Yang, W. Liu, X.-Y. Wu, Y.-T. Long, Understanding single-molecule reactions using nanopore-based techniques, *Nat. Chem.* **2025**, *17*, 1450-1461.
2. W. Liu, Q. Zhu, C.-N. Yang, Y.-H. Fu, J.-C. Zhang, M.-Y. Li, Z.-L. Yang, K.-L. Xin, J. Ma, M. Winterhalter, **Y.-L. Ying\***, Y.-T. Long. Single-molecule sensing inside stereo- and regio-defined hetero-nanopores, *Nat. Nanotechnol.*, **2024**, *19*, 1693-1701.
3. F. Gao, J.-H. Wang, H. Ma, B.-Q. Xia\*, L.-Q. Wen\*, Y.-T. Long, **Y.-L. Ying\***. Identification of oligosaccharide isomers using electrostatically asymmetric OmpF nanopore, *Angew. Chem. Int. Ed.*, **2025**, *64*, e202422118.
4. X.-Y. Li, Y.-H. Fu, N.-N. Wei, R.-J. Yu, H. Bhatt, L.-M. Zhang, F. Yan, F. Xia, A.G. Ewing, Y.-T. Long, **Y.-L. Ying\***. Emerging data processing methods for single-entity electrochemistry, *Angew. Chem. Int. Ed.*, **2024**, *136*, e202316551.
5. H. Ma\*, Y.-Y. Wang, Y.-X. Li, B.-K. Xie, Z.-L. Hu, R.-J. Yu, Y.-T. Long, **Y.-L. Ying\***. Label-free mapping of multivalent binding pathways with ligand-receptor-anchored nanopores, *J. Am. Chem. Soc.*, **2024**, *146*, 28014-28022.
6. W. Liu, C.-N. Yang, Z.-L. Yang, R.-J. Yu, Y.-T. Long, **Y.-L. Ying\***. Observing confined local oxygen-induced reversible thiol/disulfide cycle with a protein nanopore, *Angew. Chem. Int. Ed.*, **2023**, *135*, e202304023.
7. X.-Y. Wu, M.-Y. Li, S.-J. Yan, J. Jie, **Y.-L. Ying\***, P. R. Chen\*, Y.-T. Long. Controlled genetic encoding of unnatural amino acids in a protein nanopore, *Angew. Chem. Int. Ed.*, **2023**, *62*, e202300582.
8. **Y.-L. Ying**, Z.-L. Hu, S. Zhang, G. Maglia\*, A. Meller\*, H. Bayley\*, C. Dekker\*, Y.-T. Long\*, et al. Nanopore techniques: Beyond DNA sequencing, *Nat. Nanotechnol.*, **2022**, *17*, 1136.
9. J. Wang, J. D. Prajapati, F. Gao, **Y.-L. Ying\***; U. Kleinekathöfer, M. Winterhalter\*, Y.-T. Long. Identification of single amino acid chiral and positional isomers using an electrostatically asymmetric nanopore, *J. Am. Chem. Soc.*, **2022**, *144*, 15072-15078.
10. X. Li, **Y.-L. Ying\***, X.-X. Fu, Y.-J. Wan, Y.-T. Long\*. Single-molecule frequency fingerprint for ion interaction networks in a confined nanopore, *Angew. Chem. Int. Ed.*, **2021**, *60*, 24582-24587.