

Curriculum Vitae

Ting-Yu Liu (劉定宇)

Distinguish Professor (2022.08~present)
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Education

1. **Visiting Scholar** (2007.04-2008.04): Dept. Materials Science and Engineering, University of Pennsylvania, USA
2. **Ph.D.** (2003-2008): Dept. Materials Science and Engineering National Chiao Tung University, Taiwan
3. **M.S.** (2001-2003): Dept. Polymer Engineering, National Taiwan University of Science and Technology, Taiwan
4. **B.S.** (1997-2001): Dept. Chemical Engineering, Yuan Ze University, Taiwan
5. **Teacher Education Program for Secondary High Schools** (2001-2003): National Taiwan University of Science and Technology, Taiwan

Experience

1. **Honorary professor** (2022.08~present): institute of Engineering, Yuan Ze University, Taiwan
2. **Professor** (2019.08~2022.07): Dept. Materials Engineering, Ming Chi University of Technology
3. **Associate Professor** (2016.08~2019.07): Dept. Materials Engineering, Ming Chi University of Technology
4. **Assistant Professor** (2013.08~2016.07): Dept. Materials Engineering, Ming Chi University of Technology
5. **Project Assistant Professor** (2011.02-2013.07): Institute of Polymer Science and Engineering, National
6. **Postdoctoral Fellow** (2009.08-2011.01): Institute of Atomic and Molecular Sciences, Academia Sinica,
7. **Executive Director** (2017.12~present): Carbon Society of Taiwan
8. **Distinguished Researcher** (2012-2013): Industrial Technology Research Institute (ITRI), Taiwan
9. **Visiting Scholar** (2011-2017): Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan
10. **Director of Practical Elite Program** (2018.08~2021.02): College of Environment and Resources, Ming Chi University of Technology
11. **Fellow of International Association of Advanced Materials** (2022.10~present)
12. **Guest Editor** (2019.10~present): Polymers (MDPI, Q1) (Special Issue of Advanced Polymer Nanocomposites I-III)
 - (I) https://www.mdpi.com/journal/polymers/special_issues/Advanced_Polymer_Nanocomposites
 - (II) https://www.mdpi.com/journal/polymers/special_issues/Advanced_Polymer_NanocompositesII
 - (III) https://www.mdpi.com/journal/polymers/special_issues/V1U9Z8LS40

Current Research Interests

1. Two Dimension (2D) Materials and Graphene-based Nanohybrids
2. Surface Enhanced Raman Scattering (SERS) Detection for Biomolecules and Environmental Pollutants
3. Electrochemical Sensors for Bio-Detection
4. Electrochemical Polymerization of Conductive Polymer (PEDOT) Composites
5. Magnetic (Iron Oxide) Drug Carriers for Intelligent Drug Controlled Release in Cancer Therapy
6. Atmospheric plasma-Induced Polymerization and Bio-interface Modifications
7. Biocompatible and Ceramic Addition Resin for Stereolithography (SLA) 3D Printer
8. Dendritic Polymers Induced Self-assembly Nanoparticles

Selected SCI Publications (10/101)

1. Umamaheswari Rajaji, Mani Govindasamy, Rinky Sha, Razan A. Alshgari, Ruey-Shin Juang*, **Ting-Yu Liu***, 2022. Surface engineering of 3D spinel $Zn_3V_2O_8$ wrapped on sulfur doped graphitic nitride composites Investigation on the dual role of electrocatalyst for simultaneous detection of antibiotic drugs in biological fluids, *Composites Part B*, 242, 110017
2. Ruey-Shin Juang, Yu-Wei Cheng*, Wan-Tzu Chen, Kuan-Syun Wang, Chun-Chieh Fu, Shou-Hsuan Liu, Ru-Jong Jeng, Cheng-Cheung Chen, Ming-Chien Yang*, **Ting-Yu Liu***, 2020. Silver nanoparticles embedded on mesoporous-silica modified reduced graphene-oxide nanosheets for SERS detection of uremic toxins and parathyroid hormone, *Appl. Surf. Sci.*, 521, 146372
3. Yu-Wei Cheng, Chien-Hsin Wu, Wan-Tzu Chen, **Ting-Yu Liu***, Ru-Jong Jeng*, 2019. Manipulated interparticle gaps of silver nanoparticles by dendron-exfoliated reduced graphene oxide nanohybrids for SERS detection, *Appl. Surf. Sci.* 469, 887–895
4. Hsing-Ying Tung, Zhen-Yu Guan, **Ting-Yu Liu**, Hsien-Yeh Chen, 2018. Vapor Sublimation and Deposition to Build Porous Particles and Composites, *Nature Communications*, 9, 2564
5. **Ting-Yu Liu***, Chieh-Ling Chen, Yi-Chen Lee, Tzu-Yi Chan, Yuh-Lin Wang, Jiang-Jen Lin*, 2016. First Observation of Physically Capturing and Maneuvering Bacteria using Magnetic Clays, *ACS Appl. Mater. Interfaces*, 8, 411
6. Jun-Ying Ho, **Ting-Yu Liu***, Jiun-Chiou Wei, Juen-Kai Wang, Yuh-Lin Wang, Jiang-Jen Lin*, 2014. Selective SERS Detecting for Hydrophobic Microorganisms by Tricomponent Nanohybrids of Silver-Silicate Platelet-Surfactant, *ACS Appl. Mater. Interfaces*, 6, 1541-1549
7. **Ting-Yu Liu**, Kun-Tong Tsai, Huai-Hsien Wang, Yu Chen, Yu-Hsuan Chen, Yuan-Chun Chao, Hsuan-Hao Chang, Chi-Hung Lin, Juen-Kai Wang, and Yuh-Lin Wang*, 2011. Functionalized Arrays of Raman-Enhancing Nanoparticles for Capture and Culture-Free Analysis of Bacteria in Human Blood, *Nature Communications*, 2, 538
8. **Ting-Yu Liu**, Kun-Ho Liu, Dean-Mo Liu, San-Yuan Chen and I-Wei Chen*, 2009. Temperature-sensitive Nanocapsules for Controlled Drug Release Caused by Magnetically Triggered Structural Disruption, *Adv. Funct. Mater.*, 19, 616-623
9. **Ting-Yu Liu**, Shang-Hsiu Hu, Dean-Mo Liu, San-Yuan Chen and I-Wei Chen*, 2009. Biomedical Nanoparticle Carriers with Combined Thermal and Magnetic Responses, *Nano Today*, 4, 52-65
10. **Ting-Yu Liu**, Wen-Ching Lin, Li-Ying Huang, San-Yuan Chen and Ming-Chien Yang*, 2005. Hemocompatibility and Anaphylatoxin Formation of Protein-Immobilizing Polyacrylonitrile Hemodialysis Membrane, *Biomaterials*, 26, 1437-1444

Selected Awards (7/73)

1. Outstanding Paper Award at Taiwan Association for Coating and Thin Film Technology (TACT) (2022)
2. Outstanding Young Researcher Award at Carbon Society of Taiwan (2022)
3. 18th National Innovation Award (2021)
4. 2021 FutureTech Award Finalists (2021)
5. 2021 Taiwan Innotech Expo (TIE), Gold metal award (2021)
6. 2020 Taiwan Innotech Expo (TIE), Silver metal award (2020)
7. 2019 Taiwan Innotech Expo (TIE), Gold metal award (2019)

Patents

1. Invention Patent of Republic of China, TW I776149 (2022)
2. Invention Patent of Republic of China, TWI631336 (2018)
3. Invention Patent of Republic of China, TW I591685 (2017)
4. Invention Patent of United States, US 9329176 B2 (2016)
5. Invention Patent of Republic of China, TW I496194 (2015)
6. Invention Patent of Republic of China, TW I481868 (2015)
7. Invention Patent of Republic of China, TW I335216 (2008)