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Curriculum Vitae

➤ CURRENT POSITION

Assistant Professor
Department of Chemistry,
National Dong Hwa University (Aug. 2019–)

➤ RESEARCH INTEREST

Organic chemistry, soft materials, luminescent materials, photochemistry, fluororous chemistry

➤ WORKING EXPERIENCE

- **Postdoctoral Researcher**
Dept. of Chemistry, Massachusetts Institute of Technology (May 2017–July 2019)
- **Postdoctoral Researcher**
Dept. of Chemistry, National Taiwan University (Oct. 2016–April 2017)
- **Research Assistant**
Dept. of Chemistry, National Taiwan University (Sep. 2011–July 2012)
- **Teaching Assistant**
Dept. of Chemistry, National Taiwan University (Aug. 2010–July 2011)

➤ EDUCATION

- Ph.D., Department of Chemistry, National Taiwan University
- M.S., Department of Chemistry, National Taiwan University
- B.S., Department of Chemistry, National Taiwan University

➤ PUBLICATIONS

1. Yu-Jie Zhong, Jian-Hong Liao, Tzu-Hao Chiu, Samia Kahlal, **Che-Jen Lin**, Jean-Yves Saillard, C. W. Liu "A Two-Electron Silver Supercage Isolated from Thermally Induced Internal Redox Reaction of A Silver(I) Hydride" *Angew. Chem. Int. Ed.* **2021**, *60*, 12712–12716
2. Shao-Xiong Luo, **Che-Jen Lin**, Kang Hee Ku, Kosuke Yoshinaga, and Timothy M. Swager "SWCNT-Penthiptylene Polymer Complexes: Applications in BTX Detection" *ACS Nano* **2020**, *14*, 7297–7307
3. Yifan Li, Alberto Concellón, **Che-Jen Lin**, Nathan A. Romero, Sibio Lin, and Timothy M. Swager "Thiophene-fused polyaromatics: synthesis, columnar liquid crystal, fluorescence and electrochemical properties", *Chem. Sci.* **2020**, *11*, 4695–4701
4. **Che-Jen Lin**, Lukas Zeininger, Suchol Savagatrup, and Timothy M. Swager "Morphology-Dependent Luminescence in Complex Liquid Colloids", *J. Am. Chem. Soc.* **2019**, *141*, 3802–3806

5. **Che-Jen Lin**, Yi-Hung Liu, Shie-Ming Peng, Teruo Shinmyozu, and Jye-Shane Yang, "Excimer-Monomer Photoluminescence Mechanochromism and Vapochromism of Pentiptycene-Containing Cyclometalated Platinum(II) Complexes", *Inorg. Chem.* **2017**, *56*, 4978–4989
6. Jye-Shane Yang and **Che-Jen Lin**, "Fate of Photoexcited *trans*-Aminostilbenes," *J. Photochem. Photobiol. A Chem.* **2015**, *312*, 107–120
7. Guan-Jhih Huang, **Che-Jen Lin**, Yi-Hung Liu, Shie-Ming Peng, and Jye-Shane Yang, "o-Amino Analogs of GFP Chromophore: Photoisomerization, Photodimerization, and Aggregation-Induced Emission", *Photochem. Photobiol.* **2015**, *91*, 714–722
8. **Che-Jen Lin**, Sandip Kumar Kundu, Cheng-Kai Lin, and Jye-Shane Yang, "Conformational Control of Oligo(*p*-Phenyleneethynylene)s with Intrinsic Substituent Electronic Effects: Origin of the Twist in Pentiptycene-Containing Systems", *Chem. Eur. J.* **2014**, *20*, 14826–14833
9. **Che-Jen Lin**, Chih-Yuan Chen, Sandip Kumar Kundu, and Jye-Shane Yang, "Unichromophoric Platinum-Acetylides That Contain Pentiptycene Scaffolds: Torsion-Induced Dual Emission and Steric Shielding of Dynamic Quenching", *Inorg. Chem.* **2014**, *53*, 737–745
10. **Che-Jen Lin**, Yi-Hung Liu, Shie-Ming Peng, and Jye-Shane Yang, "Photoluminescence and *trans* → *cis* Photoisomerization of Aminostyrene-Conjugated Phenylpyridine C^N Ligands and Their Complexes with Platinum(II): The Styryl Position and the Amino Substituent Effects" *J. Phys. Chem. B* **2012**, *116*, 8222–8232

➤ **HONORS & AWARDS**

- Excellence in Teaching Award, Department of Chemistry, National Dong Hwa University (2022)
- Award of Excellent Mentor, Department of Chemistry, National Dong Hwa University (2022)
- Certificate in EMI Skills, Cambridge English Language Assessment (2022)
- Postdoctoral Research Abroad Program, MOST, NTD 1,300,000 per year (2017)
- Outstanding Oral Presentation Award, 1st ACS Taiwan Chapter Graduate Student Conference (2016)
- Daxin Scholarship, NTD 120,000 per year (2014)
- Oral Presentation Award, 2014 Spring Symposium of Photochemistry (2014)
- Excellent Teaching Assistant Award, National Taiwan University. (2013)
- Award from the Dean of the College of Science, National Taiwan University. (2009)

➤ STATEMENT OF RESEARCH

My research focus on (a) stimuli-responsive fluorescence materials, (b) porous conjugated systems, and (c) emissive complex emulsion sensors.

We are interested in the stimuli-responsive materials which change emission colors while heating, grinding, or solvent-fuming. We incorporate the fluorocarbon chains into the dyes: the introduction of fluorocarbon chains facilitates aggregation efficiency and increases aggregates' stability. We can interconvert the emission color of powders by grinding and solvent vapor fuming. Our group synthesizes fluorous dyes with reactive sites sensitive to enzyme activity, pathogens, and pollutants for chemosensors and biosensor design.

Iptycene is a rigid, three-dimensional, and conjugated scaffold. We exploit the structural merit iptycene to design a Janus building block for porous conjugated polymers, metallopolymer and organic framework. The porous structures with large surface area and high stability are potential materials for the energy sector and drug delivery.

Lastly, we are developing complex emulsions that provide a novel real-time sensing platform. We synthesize amphiphilic dyes and polymer surfactants to stabilize emulsions without external surfactants. The complex emulsions change emission colors while morphology varies. The morphology change of complex emulsions can identify the specific pathogens. We have constructed a microfluidic system to prepare monodispersed emulsions and set up microscopes to characterize the morphology. We are aimed to provide a cheap and sustainable sensing method that can be used in the real world.