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个人履历 Education and Experience

- 2012.11 — 复旦大学化学系，教授、博士生导师
- 2009.04 — 2011.11 复旦大学化学系，副研究员、博士生导师
- 2005.11 — 2009.04 德国波恩大学化学系，洪堡学者、助理研究员；
- 2003.11 — 2005.11 加拿大蒙特利尔大学化学系，博士后 Advisor: James D. Wuest 教授
- 1998.09 — 2003.10 中国科学院上海有机化学研究所，博士导师：戴立信 院士，
- 1994.09 — 1998.08 东华理工大学，本科，分析化学

研究兴趣 Research Interests

近年来研究兴趣主要集中在在以优势金属有机化合物的功能为导向，通过超分子组装策略构筑金属有机组装体，详细研究和考察了组装体功能及应用。一方面通过自组装策略制备一系列刺激响应型金属有机分子凝胶，根据其理化性质应用于超分子催化、识别及细胞成像等方面；另一方面基于金属氮杂环卡宾化合物活性高和稳定性好的特点，以刚性咪唑盐作为前体通过配位组装、超交联策略制备了一系列稳定、高效、可重复使用的固体分子催化材料，在实现优势催化就高效负载的同时，实现了二氧化碳、生物质等资源小分子高值化及能源转化方面的应用。在 *Adv. Mater.*; *Angew. Chem.*; *ACS Catal.*; *Green. Chem.*; *Chem. Commun.*; *Org. Lett.* 等国际知名学术期刊作为通讯作者发表 SCI 论文七十余篇，他引千余次，获得了国内外同行的高度评价和肯定。

学术兼职 Adjunct Research Positions

- 《中国化学快报》 (*Chin. Chem. Lett.*) 副主编 (Associate Editor)
- 《绿色合成与催化》 (*Green Synth. Catal.*) 执行主编 (Executive Editors-in-Chief)

获奖情况 Awards Received

- 2013 年获得“Thieme Chemistry Journal Award”
- 2012 年获“上海市浦江人才 (D 类)”称号
- 2011 年获“上海曙光学者”称号
- 2010 年获“上海市青年科技启明星 (A 类)”称号
- 2005 年获德国洪堡基金会“洪堡学者”称号

发表文章 **Selected Publications:**

- Wu, J.; Shen, L.; Chen Z.-N.; Zheng, Q.; Xu, X.; **Tu, T.*** Iridium-Catalyzed Selective Cross-Coupling of Ethylene Glycol and Methanol to Lactic Acid. *Angew. Chem. Int. Ed.* **2020**, 59, 10421-10425. (SCI, **IF: 12.9**)
- Wu, J.; Shen, L.; Duan, S.; Chen, Z.-N.; Zheng, Q.; Liu, Y.; Sun, Z.; Clark, J.; Xu, X.; **Tu, T.*** Selective Catalytic Dehydrogenative Oxidation of Bio-Polyols to Lactic Acid. *Angew. Chem. Int. Ed.* **2020**, 59, 13871-13878. (SCI, **IF: 12.9**)
- Shen, Y.; Zheng, Q.; Zhu, H.; **Tu, T.*** Hierarchical Porous Organometallic Polymers Fabricated by Direct Knitting: Recyclable Single-Site Catalysts with Enhanced Activity. *Adv. Mater.* **2020**, 32, 1905950. (SCI, **IF: 27.4**)
- Wang, J.; Wu, J.; Chen, Z.-N.; Wen, D.; Chen, J.; Zheng, Q.; Xu, X.; **Tu, T.*** Selective mono-N-methylation of nitroarenes with methanol catalyzed by atomically dispersed NHC-Ir solid assemblies. *J. Catal.* **2020**, 389, 337-344. (SCI, **IF: 7.9**)
- Shen, Y.; Zheng, Q.; Liu, J.; **Tu, T.*** Metallo-aerogels derived from chitosan with encapsulated metal nanoparticles as robust, efficient and selective nanocatalysts towards reduction of nitroarenes. *Nano Res.* **2020**, DOI: 10.1007/s12274-020-3040-1. (SCI, **IF: 8.2**)
- Zhu, H.; Shen, Y.; Wen, D.; Le, Z.-G.; **Tu, T.*** Selective Synthesis of ortho-Substituted Diarylsulfones by Using NHC-Au Catalysts under Mild Conditions. *Org. Lett.* **2019**, 21, 974-979. (SCI, **IF: 6.5**)
- Zhang, Y.; Wang, J.; Zhu, H.; **Tu, T.*** N-Formylation of Amines with CO₂ and H₂ by Using NHC-Iridium Coordination Assemblies as Solid Molecular Catalysts. *Chem. Asian J.* **2018**, 13, 3018-3021. (SCI, **IF: 4.1**)
- Chen, J.; Wang, J.; **Tu, T.*** Ruthenium-Pincer-Catalyzed Hydrogenation of Lactams to Amino Alcohols. *Chem. Asian J.* **2018**, 13, 2559-2565. (SCI, **IF: 4.1**)
- Fang, W.; Zhang, Y.; Wu, J.; Liu, C.; Zhu, H.; **Tu, T.*** *Recent Advances in Supramolecular Gels and Catalysis.* *Chem. Asian J.* **2018**, 13, 712-729. (SCI, **IF: 4.1**)
- Zhu, H.; Shen, Y.; Deng, Q.; Chen, J.; **Tu, T.*** Acenaphthoimidazolylidene Gold Complex-Catalyzed Alkylsulfonylation of Boronic Acids by Potassium Metabisulfite and Alkyl Halides: A Direct and Robust Protocol To Access Sulfones, *ACS Catal.* **2017**, 7, 4655-4659, (SCI, **IF: 10.6**)
- Sun, Z.; Chen, J.; **Tu, T.*** NHC-based coordination polymers as solid molecular catalysts for reductive amination of biomass levulinic acid, *Green Chem.* **2017**, 19, 789-794, (SCI, **IF: 9.1**)
- Zhu, H.; Shen, Y.; Deng, Q.; Chen Jinjin*, **Tu, T.*** Pd(NHC)-catalyzed alkylsulfonylation of boronic acids: a general and efficient approach for sulfone synthesis, *Chem. Commun.* **2017**, 53, 12473-12476, (SCI, **IF: 6.3**)
- Deng, Q.; Shen, Y.; Zhu, H.; **Tu, T.*** A magnetic nanoparticle-supported N-heterocyclic carbene-palladacycle: an efficient and recyclable solid molecular catalyst for Suzuki-Miyaura cross-coupling of 9-chloroacridine, *Chem. Commun.* **2017**, 53, 13063-13066, (SCI, **IF: 6.3**)
- Chen, J.; Wu, J.; **Tu, T.*** Sustainable and Selective Monomethylation of Anilines by Methanol with Solid Molecular NHC-Ir Catalysts, *ACS Sustainable Chem. Eng.* **2017**, 5, 11744-11751, (SCI, **IF: 6.0**)
- Sun, Z.; Chen, J.; Liu, Y.; **Tu, T.*** Chiral Titanium Coordination Assemblies: Robust Cooperative Self-

Supported Catalysts for Asymmetric Ring Opening of meso-Epoxides with Aliphatic Amines, *Adv. Synth. Catal.* **2017**, 359, 494-505, (SCI, IF: 5.6)

- Chen, J.; Zhu, H.; Chen Jinjin*, Le Zhang-Gao*, Tu, T.* Synthesis, Characterization and Catalytic Application of Pyridine-Bridged N-Heterocyclic Carbene–Ruthenium Complexes in the Hydrogenation of Carbonates, *Chem. Asian J.* **2017**, 12, 2809-2812, (SCI, IF: 4.1)
- Deng, Q.; Zhang, Y.; Zhu, H.; Tu, T.* Robust Acenaphthoimidazolydene Palladacycles: Highly Efficient Catalysts for the Amination of N-Heteroaryl Chlorides, *Chem. Asian J.* **2017**, 12, 2364-2368, (SCI, IF: 4.1)
- Tu, Z.; Tan, J.; Chen Zhiyuan*, Tu, T.* Iridium-Catalyzed Regio- and Stereoselective C-H Oxidative Reaction to (Z)-3-Arylidene-2-oxindole Imides under Neutral Conditions, *Adv. Synth. Catal.* **2017**, 359, 4294-4299, (SCI, IF: 5.6)
- Fang, W.; Liu, C.; Yu, F.; Liu, Y.; Li, Z.; Chen, L.; Bao, X.; Tu, T.* Macroscopic and Fluorescent Discrimination of Adenosine Triphosphate via Selective Metallo-hydrogel Formation: A Visual, Practical, and Reliable Rehearsal toward Cellular Imaging, *ACS Appl. Mater. Interfaces* **2016**, 8, 20583–20590, (SCI, IF: 7.5)
- Sun, Z.; Liu, Y.; Chen, J.; Huang, C.; Tu, T.* Robust Iridium Coordination Polymers: Highly Selective, Efficient, and Recyclable Catalysts for Oxidative Conversion of Glycerol to Potassium Lactate with Dihydrogen Liberation, *ACS Catal.* **2015**, 5, 6573–6578, (SCI, IF: 10.6)
- Zhu, H.; Shen, Y.; Deng, Q.; Tu, T.* Copper-catalyzed electrophilic amination of sodium sulfinates at room temperature, *Chem. Commun.* **2015**, 51, 16573-16576, (SCI, IF: 6.3)
- Fang, W.; Liu, C.; Chen, J.; Lu, Z.; Li, Z.; Bao, X.; Tu, T.* The electronic effects of ligands on metal-coordination geometry: a key role in the visual discrimination of dimethylaminopyridine and its application towards chemo-switch, *Chem. Commun.* **2015**, 51, 4267-4270, (SCI, IF: 6.3)
- Jiang, J.; Zhu, H.; Shen, Y.; Tu, T.* Acenaphthoimidazolium chloride-enabled nickelcatalyzed amination of bulky aryl tosylates, *Org. Chem. Front.* **2014**, 1, 1172–1175, (SCI, IF: 5.0)
- Fang, W.; Liu, C.; Lu, Z.; Sun, Z.; Tu, T.* Tunable reversible metallo-hydrogels: a new platform for visual discrimination of biothiols, *Chem. Commun.* **2014**, 50, 10118–10121, (SCI, IF: 6.3)
- Liu, S.; Deng, Q.; Fang, W.; Gong, J.; Song Mao-Ping*, Xu, M.; Tu, T.* Efficient and scalable Pd-catalyzed double aminocarbonylations under atmospheric pressure at low catalyst loadings, *Org. Chem. Front.* **2014**, 1, 1261–1265, (SCI, IF: 5.0)
- Fang, W.; Liu, X.; Lu, Z.; Tu, T.* Photoresponsive metallo-hydrogels based on visual discrimination of the positional isomers through selective thixotropic gel collapse, *Chem. Commun.* **2014**, 50, 3313–3316, (SCI, IF: 6.3)
- Tu, Tao*, Fang, W.; Sun, Z. *Visual-size Molecular Recognition Based on Gels*, *Adv. Mater.* **2013**, 25, 5304–5313, (SCI, IF: 19.8).
- Fang, W.; Sun, Z.; Tu, T.* Novel Supramolecular Thixotropic Metallohydrogels Consisting of Rare Metal-Organic Nanoparticles: Synthesis, Characterization, and Mechanism of Aggregation, *J. Phys. Chem. C* **2013**, 117, 25185–25194. (SCI, IF: 4.5)
- Xu, M.; Li, X.; Sun, Z.; Tu, T.* Suzuki-Miyaura cross-coupling of bulky anthracenyl carboxylates by using pincer nickel N-heterocyclic carbene complexes: an efficient protocol to access fluorescent

anthracene derivatives, *Chem. Commun.* **2013**, 49, 11539–11541, (SCI, IF: 6.3)

- Fang, W.; Deng, Q.; Xu, M.; Tu, T.* Highly Efficient Aminocarbonylation of Iodoarenes at Atmospheric Pressure Catalyzed by a Robust Acenaphthoimidazolyidene Allylic Palladium Complex, *Org. Lett.* **2013**, 15, 3678-3681, (SCI, IF: 6.6).
- Liu, Z.; Dong, N.; Xu, M.; Sun Z.; Tu, T.* Mild and Efficient Negishi Cross-coupling Reactions Catalyzed by Acenaphthoimidazolyidene Palladium Complexes at Low Catalyst Loadings, *J. Org. Chem.* **2013**, 78, 7436-7444, (SCI, IF: 4.8).
- Tu, T.*; Sun, Z.; Fang, W.; Xu, M.; Zhou, Y. Robust Acenaphthoimidazolyidene Palladium Complexes: Highly Efficient Catalysts for Suzuki-Miyaura Couplings with Sterically Hindered Substrates. *Org. Lett.* **2012**, 14, 4250-4253, (SCI, IF: 6.6).
- Tu, T.*; Wang, Z.; Liu, Z.; Feng, X.; Wang, Q. Efficient and Practical Transition Metal-free Catalytic Hydration of Organonitriles to Amides. *Green Chem.* **2012**, 14, 921-924, (SCI, IF: 9.1).
- Tu, T.*; Fang, W.; Jiang, J. A Highly Efficient Precatalyst for Amination of Aryl Chlorides: Synthesis, Structure and Application of a Robust Acenaphthoimidazolyidene Palladium Complex. *Chem. Commun.* **2011**, 47, 12358-12360, (SCI, IF: 6.3).
- Tu, T.*; Fang, W.; Bao, X.; Li, X.; Dötz, K. H. Visual Chiral Recognition through Enantioselective Metallogel Collapsing: Synthesis, Characterization, and Application of Platinum-Steroid Low-Molecular-Mass Gelators. *Angew. Chem. Int. Ed.* **2011**, 50, 6601-6605, (SCI, IF: 12.0).
- Tu, T.*; Mao, H.; Herbert, C.; Xu, M.; Dötz, K. H. A Pyridine-bridged Bis-benzimidazolyidene Pincer Nickel(II) Complex: Synthesis and Practical Catalytic Application towards Suzuki-Miyaura Coupling with Less-activated Electrophiles. *Chem. Commun.* **2010**, 46, 7796-7798, (SCI, IF: 6.3).
- Tu, T.*; Feng, X.; Wang, Z.; Liu, X. A Robust Hydrophilic Pyridine-bridged Bis-benzimidazolyidene Palladium Pincer Complex: Synthesis and Its Catalytic Application towards Suzuki-Miyaura Couplings in Aqueous Solvents. *Dalton Trans.* **2010**, 39, 598-10600, (SCI, IF: 4.0).
- Tu, T.*; Malineni, J.; Bao, X.; Dötz, K. H.* A Lutidine-Bridged Bis-Perimidinium Salt: Synthesis and Application as a Precursor in Palladium-Catalyzed Cross-Coupling Reactions. *Adv. Synth. Catal.* **2009**, 351, 1029-1034, (SCI, IF: 5.6).
- Tu, T.*; Bao, X.; Assenmacher, W.; Peterlik, H.; Daniels, J.; Dötz, K. H.* Efficient Air-Stable Organometallic Low-Molecular-Mass Gelators for Ionic Liquids: Synthesis, Aggregation and Application of Pyridine-Bridged Bis(benzimidazolyidene)-Palladium Complexes. *Chem. Eur. J.* **2009**, 15 (8), 1853-1861, (VIP, SCI, IF: 5.3).
- Tu, T.*; Malineni, J.; Dötz, K. H.* A Novel Pyridine-bridged Bis-benzimidazolyidene Pincer Palladium Complex: Synthesis and Catalytic Properties. *Adv. Synth. Catal.* **2008**, 350 (11-12), 1791-1795, (SCI, IF: 5.6).
- Tu, T.*; Assenmacher, W.; Peterlik, H.; Schnakenburg, G.; Dötz, K. H.* Pyridine-bridged Benzimidazolium Salts: Synthesis, Aggregation, and Application as Phase-transfer Catalysts. *Angew. Chem. Int. Ed.* **2008**, 47, 7127-7131, (SCI, IF: 12.0).
- Tu, T.*; Assenmacher, W.; Peterlik, H.; Weisbarth, R.; Nieger, M.; Dötz, K. H.* An Air-stable Organometallic Low-molecular-mass Gelator: Synthesis, Aggregation, and Catalytic Application of a Palladium Pincer Complex. *Angew. Chem. Int. Ed.* **2007**, 46, 6368-6371, (SCI, IF: 12.0).