**TEEP Online internship**

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| Grade requirements | Master or Doctoral Student | Professional subjects requirements | Organic or Inorganic chemistry major |
| Research theme I | Design Bio-inspired coordination complexes for understand the biological reaction | | |
| Brief description of research direction:  Sodio Lab try to examine the role of metals in biology includes the synthesis and study of bio-inspired metal complexes (also model complexes) to understand the biological reaction by chemical point of view. Those achievement could apply in medicine and catalyst design. The study of inorganic models or mimics could imitate the behavior of metalloproteins.   1. Narwane, M.; Chang, Y.-L.; Ching, W.-M.; Tsai, M.-L.; Hsu, S. C. N.\* “Investigation on the Coordination Behaviors of Tris(2-pyridyl)pyrazolyl Borates Iron(II) Complexes” *Inorganica Chim. Acta* **2019**, *495*, 118966. 2. Huang, Y.-T.; Haribabu, J; Chien, C.-M.; Sabapathi, G; Chou, C.-K.; Karvembu, R.; Venuvanalingam, P.; Ching, W.-M.; Tsai, M.-L.; Hsu, S. C. N.\* “Half-sandwich Ru(η6-*p*-cymene) complexes featuring pyrazole appended ligands: Synthesis, DNA binding and *in vitro* cytotoxicity” *J. Inorg. Biochem.* **2019**, *194*, 74-84. 3. Chuang, W.-J.; Narwane, M.; Chen, H.-Y.; Kao, C.-L.; Huang, B.; Hsu, K.-M.; Wang, Y.-M.\*; Hsu, S. C. N.\*“Nitric Oxide Release Study of a Bio-inspired Copper(I)-nitrito Complex on Chemical and Biological Conditions” *Dalton Transactions*, **2018**, *47,* 13151-13157. 4. Chang, Y.-L.; Lin, Y.-F.; Chuang, W.-J. Kao, C.-L.; Narwane, M.; Chen, H.-Y.; Chiang, M. Y.; Hsu, S. C. N.\* “Structure and Nitrite Reduction Reactivity Study of Bio-inspired Copper(I)-nitro Complexes in Steric and Electronic Considerations of Tridentate Nitrogen Ligand” *Dalton Transactions*, **2018**, *47,* 5335-5341. | | | |
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| Research theme II | Understanding the contraction factors of metallo-supramolecular complexes | | |
| Brief description of research direction:  Sodio lab also have a range of well-studied structural and functional building blocks which are able to use to build up larger functional architectures. Biological systems are often the inspiration for supramolecular research.   1. Huang, Y. C.; Chen, H.-Y.; Chang, Y.-L.; Vasanthakumar, P.; Chen, S.-Y.; Kao, C.-L.; Wu, C. H.-Y.; Hsu, S. C. N.\* “Synthesis of Triisocyanomesitylene β‑diketiminato Copper(I) Complexes and Evaluation of Isocyanide π-back Bonding” *Polyhedron* **2020**, *192*, 114828 2. Huang, Y.-C.; Lan, W.-Y.; Ching, W.-M.; Tsai, M.-L.; Hsu, S. C. N.\* “Formation of Iron(III)-Thiolate Metallocyclophane Using a Ferrocene-Based Bis-Isocyanide” ***New J. Chem.***, **2020**, *44*, 18242-18249 3. Huang, Y.-T.; Chen, H.-Y.; Cheng, C.-Y.; Tsai, Y.-L.; Chiang, M. Y.; Hsu, S. C. N\* “Stepwise and self-assembly synthesis of tetranuclear iron-thiolate-diisocyanide metallocyclophane complexes” J. Chin. Chem. Soc. **2017**, *64*, 94-102 4. Chen, Y.-H.; Lin, T. T. Y.; Chen, H.-Y.; Kao, C.-L.; Chen, H.-Y.; Hsu, S. C. N.\*; Carey, J. R.; Chiang, M. Y. “A simple competition assay to probe pentacopper(I)-thiolato cluster ligand exchange” *J. Inorg. Biochem.* **2013**, *120*, 24-31. | | | |