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Education:

Ph.D degree, University of Malaya, Malaysia

BSc (Hons) in Chemistry, University of Malaya, Malaysia

Research Interests:

Organotin Chemistry

Organotin compounds are versatile reagents, particularly in organic chemistry. Unfortunately, their utilization is not without problems. Organotins tend to be relatively toxic, their by-products are difficult to isolate and hence represent an ever increasing disposal problem. Yet because of their synthetic utility and potential biological properties, the use of organotins remains common place in academic and even industrial syntheses. The main aim of our research program is to minimize the toxicity and environmental hazards associated with organotins. In this regard, much of our focus has been on the development of new organotin chemicals which are selective in their toxicological effects.

Research Areas

1. Structural chemistry

Organotin compounds are of interest in view of their considerable structural diversity.

2. Biological study

Organotin compounds have been receiving increasing attention in recent years due to their potential biological properties. A number of diorganotin complexes have been identified to possess enhanced cytotoxicity compared to cisplatin towards cancer cells. We are now investigating the interaction of these compounds with DNA and the in vivo antitumour and anti-inflammatory activities of these organotin compounds

3. Degradation and Analysis of Organotin Compounds

The toxic effects of organotin compounds, particularly tributyltins in the environment have been well documented and have led to extensive research into the analytical techniques for their determination in a varieties of matrices. It has also been an important focus to study the fate of organotin compounds in the environment as organotin compounds are known to degrade to non-toxic inorganic tin. A number of methods, such as the GC-ICP-MS and GC-FPD technique have been used to extract, separate and detect organotin compounds in various sample matrices and there are significant variation in the results obtained.

Selected Publications [2011-2016]:

1. Ngui Khiong Ngan, **Kong Mun Lo** and Chee Seng Ricahrd Wong, Dinuclear and Polynuclear Dioxomolybdenum(VI) Schiff Base Complexes: Synthesis, Structural Elucidation, Spectroscopic Characterization, Electrochemistry and Catalytic Property, *Polyhedron*, (2012) 33 , 235-251.
2. Lee See Mun, Mohd Ali Hapipah, a Sim Kae Shin, Abdul Malek Sri Nurestrib and **Lo Kong Mun**, Synthesis, structural characterization and in vitro cytotoxicity of diorganotin complexes with Schiff base ligands derived from 3-hydroxy-2-naphthoylhydrazide, *Applied Organometallic Chemistry*, (2012) 26, 310-319
3. Ponnuchamy Pitchaimani, **Kong Mun Lo** & Kuppanagounder P. Elango, Synthesis, spectral characterization, crystal structures and catalytic activity of a series of lanthanide(III) azepane dithiocarbamate complexes, *Polyhedron*, (2013) 54, 60-66.
4. **Kong Mun Lo** and Yen Li Yung, Integration of Headspace Solid Phase Micro-Extraction with Gas Chromatography for Quantitative Analysis of Formaldehyde, *Bull. Korean Chem. Soc.* (2013), 34(1), 139-142.
5. See Mun Lee, Hapipah Mohd. Ali, Kae Shin Sim, Sri Nurestri Abdul Malek, **Kong Mun Lo**, Synthesis, characterization and biological activity of diorganotin complexes with ONO terdentate Schiff base, *Inorganica Chimica Acta* 406 (2013) 272–278
6. Muhammad Ali Ehsan, T. A. Nirmal Peiris, K. G. Upul Wijayantha, Marilyn M. Olmstead, Zainudin Arifin, Muhammad Mazhar, **K. M. Lo** and Vickie McKee, Development of molecular precursors for deposition of indium sulphide thin film electrodes for photoelectrochemical applications, *Dalton Trans.*, (2013), 42, 10919–10928
7. Naqeebullah, Yang Farina, Kok Meng Chan, **Lo Kong Mun**, Nor Fadilah Rajab and Theng Choon Ooi, Diorganotin(IV) Derivatives of *N*-Methyl *p*-Fluorobenzo-Hydroxamic Acid: Preparation, Spectral Characterization, X-ray Diffraction Studies and Antitumor Activity, *Molecules* (2013), 18, 8696-8711.
8. Muhammad Nadeem Akhtar, Seema Zareen, Swee Keong Yeap, Wan Yong Ho, **Kong Mun Lo**, Aurangzeb Hasan and Noorjahan Banu Alitheen , Total Synthesis, Cytotoxic Effects of Damnacanthal, Nordamnacanthal and Related Anthraquinone Analogues, *Molecules* (2013), 18, 10042-10055.
9. Ifzan Arshad, [a] Shumaila Ashraf, Asghar Abbas, Shahid Hameed, **Kong Mun Lo**, and Muhammad Moazzam Naseer, conformational isomerism in a conformational Polymorph of 2,5-dibenzylidene cyclopentanone: Crystallographic and quantum chemical Structures, *Eur. Chem. Bull.*, (2014), 3(6), 587-592
10. Naqeebullah Khan, Yang Farina, **Lo Kong Mun**, Nor Fadilah Rajab, Normah Awang , Syntheses, spectral characterization, X-ray studies and in vitro cytotoxic activities of triorganotin(IV) derivatives of *p*-substituted *N*-methylbenzylaminedithiocarbamates, *Journal of Molecular Structure* 1076 (2014) 403–410.
11. Naqeebullah Khan, Yang Farina, **Lo Kong Mun**, Nor Fadilah Rajab, Normah Awang, Triorganotin(IV) complexes with *o*-substituted arylhydroxamates: Synthesis, spectroscopic characterization, X-ray structures and in vitro cytotoxic activities. *Journal of Organometallic Chemistry* ,763-764 (2014) 26e33.
12. Kit May Chow and **Kong Mun Lo**, Synthesis, spectral characterization and crystal structures of benzyltin complexes with (E)-4-chloro-*N'*-(2-hydroxy-4-methoxybenzylidene) benzohydrazide, *Polyhedron* 81 (2014) 370–381.
13. Faiza Anam, Asghar Abbas, **Kong Mun Lo**, Zia-ur-Rehman, Shahid Hameed and Muhammad Moazzam Naseer, Homologous 1,3,5-triarylpyrazolines: synthesis, CH-- π interactions guided self-assembly and effect of alkyloxy chain length on DNA binding properties, *New J. Chem.*, (2014), 38, 5617—562.
14. Shin Thung Chew, **Kong Mun Lo**, Sze Koon Lee, Mok Piew Heng, Wuen Yew Teoh, Kae Shin Sim, Kong Wai Tan, Copper complexes with phosphonium containing hydrazone ligand: Topoisomerase inhibition and cytotoxicity study, *European Journal of Medicinal Chemistry* 76 (2014) 397-407.
15. Shin Thung Chew, Kong Mun Lo, Saravana Kumar Sinniah, Kae Shin Sim and Kong Wai Tan, Synthesis, characterization and biological evaluation of cationic hydrazone copper complexes with diverse diimine co-ligands, *RSC Adv.*, (2014), 4, 61232–61247.

16. Naqeebullah Khan, Yang Farina, **Lo Kong Mun**, Nor Fadilah Rajab, Normah Awang, Syntheses, characterization, X-ray diffraction studies and in vitro antitumor activities of diorganotin(IV) derivatives of bis(p-substituted-N-methylbenzylaminedithio-carbamates), *Polyhedron* 85 (2015) 754–760.
17. See Mun Lee, Kae Shin Sim, **Kong Mun Lo**, Synthesis, characterization and biological studies of diorganotin(IV) complexes with tris[(hydroxymethyl)aminomethane] Schiff bases, *Inorganica Chimica Acta* 429 (2015) 195–208.
18. Sohail Ahmed, Muhammad Adil Mansoor, Wan Jeffrey Basirun, Mehran Sookhikian, Nay Ming Huang, **Lo Kong Mun**, Tilo Soehnel, Zainudin Arifin and Muhammad Mazhar, The synthesis and characterization of a hexanuclear copper–yttrium complex for deposition of semiconducting $\text{CuYO}_2\text{--}0.5\text{Cu}_2\text{O}$ composite thin films *New J. Chem.*, 2015, 39, 1031—1037.
19. Muhammad Nadeem Akhtar, Nurshafika M. Sakeh, Seema Zareen, Sana Gul, **Kong Mun Lo**, Zaheer Ul-Haq, Syed Adnan Ali Shah, Syahida Ahmad Design and synthesis of chalcone derivatives as potent tyrosinase inhibitors and their structural activity relationship *Journal of Molecular Structure*, 1085 (2015) 97–103.
20. Ponnuchamy Pitchaimani, **Kong Mun Lo**, Kuppanagounder P. Elango Synthesis, crystal structures, luminescence properties and catalytic application of lanthanide(III) piperidine dithiocarbamate complexes, *Polyhedron* 93 (2015) 8–16.
21. Ponnuchamy Pitchaimani, **Kong Mun Lo**, Kuppanagounder P. Elango, Synthesis, spectral characterization, crystal structures of lanthanide(III) pyrrolidine dithiocarbamate complexes and their catalytic activity, *Journal of Coordination Chemistry*, (2015) 68:12, 2167-2180.
22. Ahmed Muhammad Naeem, Yasin Khawaja Ansar, Khan Bilal Ahmad, Riaz Muhammad, Sadiq-Ur-Rehman, **Mun Lo Kong**, Naseer Mohammad Moazzam, Arshad Ifzan, Irshad Muhammad, One-pot Synthesis, Characterization and Crystal Structure Determination of Novel 1,4,5-Trisubstituted 1,2,3-Triazole with Two Conformational Isomers: 1-Benzyl-5-((4-methoxyphenyl)ethynyl)-4-phenyl-1H-1,2,3-triazole, *Chinese J. Struct. Chem.* (2016) 35(1), 55–60.
23. Somayah Fani, Behnam Kamalidehghan, **Kong Mun Lo**, Najihah Mohd Hashim, Kit May Chow, Fatemeh Ahmadipour, Synthesis, structural characterization, and anticancer activity of a monobenzyltin compound against MCF-7 breast cancer cells, *Drug Design, Development and Therapy* (2015) 9 6191–6201
24. Rabia Naeem, Sohail Ahmed, **Kong Mun Lo**, Wan Jeffrey Basirun, Rosiyah Yahya, Misni Misran, T. A. Nirmal Peiris, Jagdeep S. Sagu, K. G. Upul Wijayantha, Arjun K. Thapa, Gamini U. Sumanasekera and Muhammad Mazhar (2015), Electric-Field Aerosol-Assisted CVD: Synthesis, Characterization, and Properties of Tin Oxide Microballs Prepared from a Single Source Precursor, *Chemical Vapor Deposition*, (2015) 21, 360-368.
25. Faiza Anam, Asghar Abbas, Kong Mun Lo, Shahid Hameed, Ponnadurai Ramasami, Yunusa Umar, Aman Ullah, Muhammad Moazzam Naseer, Synthesis, crystal structure, experimental and theoretical investigations of 3-(4-ethoxy-3-methoxyphenyl)-1-phenylprop-2-en-1-one, *Journal of Molecular Structure* 1127 (2017) 742-750.
26. See Mun Lee,* Kong Mun Lo, Sang Loon Tan and Edward R. T. Tiekink*, Zwitterionic 4-bromo-6-methoxy-2-[[tris(hydroxymethyl)-methyl]iminiumylmethyl]phenolate: crystal structure and Hirshfeld surface analysis, *Acta Cryst.* (2016) E72, 1223-1227.
27. See Mun Lee, Kong Mun Lo, Sang Loon Tan and Edward R. T. Tiekink, (Tris{2-[(5-chloro-2-oxidobenzylidene-jO)aminojN]ethyl}amine-jN)ytterbium(III): crystal structure and Hirshfeld surface analysis, *Acta Cryst.* (2016) E72, 1390-1395.