

IAS Distinguished Lecture

From Homonuclear Metal String Complexes to Heteronuclear Metal String Complexes

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Date : 30 November 2018 (Friday)

Time : 2:00pm – 3:30pm (*Light refreshments will be served from 3:30pm to 4:00pm*)

Venue: Wong To Yick Tong Lecture Theatre (LT-17), 4/F, Yeung Kin Man Academic Building
City University of Hong Kong



Abstract

The study of metal string complexes with 1-D transition metal frameworks began in the early 1990s. Since these complexes provide great insight into multiple metal-metal bonds, and may have potential applications as molecular wires, this field of research has grown in the past 20 years. As such, the electronic structure of the simplest trinuclear complexes, the supporting ligand systems, and single molecular conductance of metal string complexes are discussed. This review will introduce the development of this field and summarize some important results in the newly designed heteronuclear metal string complexes (HMSCs). These molecules may be of great interest in studying the nature of heterometallic electronic effects and molecular electronic applications.

Biography

In the forty years at the National Taiwan University, Prof. Peng has concentrated on teaching and research. Intermittently, he also served as the acting director of the Institute of Chemistry at the Academia Sinica, the chairman of the Chemistry Department, the chief editor of the Journal of the Chinese Chemical Society, the chief editor of the monthly journal of the National Science Council, the Vice President of National Taiwan University, the President of the Chinese Chemical Society Located in Taipei and the Vice President of the Academia Sinica. Forty years ago, the research environment in Taiwan was quite rudimentary and needed much improvement. Prof. Peng therefore helped in promoting the development of research in crystallography and synthetic chemistry. Together with Professor Yu Wang, they organized several symposia on crystallography, and set up the Laboratory for X-Ray Single Crystal Analysis as a part of NTU's Major Instruments Center. This laboratory was the first of its kind in Taiwan and has been extremely productive. The laboratory has played a major role in elevating the standard of research in crystallography and structural chemistry in this country. For Prof. Peng's own research, he has focused on studying the synthesis, structural analysis, and bonding of novel inorganic complexes. He has published over 900 papers in these subjects. In recent years, he has been successful in synthesizing metal-string-complexes. The novel structure of these complexes opens up a new chapter in the study of metal-metal bonding in transition metal complexes. Its development may find applications as molecular electronics in the nanometer scale.



All are welcome

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