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Aggregation Structure and Properties of Some Molecule Materials

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Molecular material aggregation structure is an important research direction in the development of material science, especially the development of two-dimensional molecular aggregated structure materials and heterostructure materials, understand the fundamental problems of aggregated structures in the optical, electrical, energy and catalytic fields and potential applications, represents the development trend of chemistry based the disciplinary scientific field. We mainly discuss some scientific problems in this field and the establishment of a series of molecular self-assembly and self-organization method using some basic concepts, combined with the molecular structure and growth characteristics, structure and energy matching principle. The controllable the aggregated structure of molecular materials from one dimension to two dimensions is realized. The properties in optical, electrical, energy and photoelectrical properties were also studied.

Biography:

Yuliang Li is a Professor at the Institute of Chemistry, Chinese Academy of Sciences. He has published more than 600 peer reviewed scientific articles and invited reviews in the journals, such as *Nat. Commun. Acc. Chem. Res., Chem. Soc. Rev., J. Am. Chem. Soc., Angew. Chem. Int. Ed., PNAS* and *Adv. Mater. et al.*. His research interests lie in the fields on design and synthesis of functional molecules, self-assembly methodologies of low dimension and large size molecular aggregations structures, chemistry of carbon and rich carbon, with particular focus on the design and synthesis of photo-electro-active molecular heterojuction materials and nanoscale and nano-structural materials.