Aggregation-Induced Emission: from Fundamentals to Applications

Ben Zhong Tang
Department of Chemistry, The Hong Kong University of Science and Technology,
Clear Water Bay, Kowloon, Hong Kong

Over the past decade, the field of aggregation induced emission (AIE) has emerged as anew platform forresearchers to investigate a variety of physical, chemical and biological processes.[1, 2]TheAIE phenomenon is contrary to aggregation-caused quenching where molecules become non-emissive or weakly emissive in the aggregate state.We have studied the fundamental aspects of the AIE processes, especially their working mechanisms, and revealed that the restriction of intramolecular motion (RIM) or structural rigidification (SR) is responsible for the observed AIE effects. A great number of new AIEgens with fluorescence and phosphorescence emissions have been developed and a large array of High-tech applications have been explored based on the RIM or SR mechanistic understanding.[3]

References

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