

Acridine *N*-Heterocyclic Carbene Gold(I) Compounds: Turning from Yellow to Blue Luminescence

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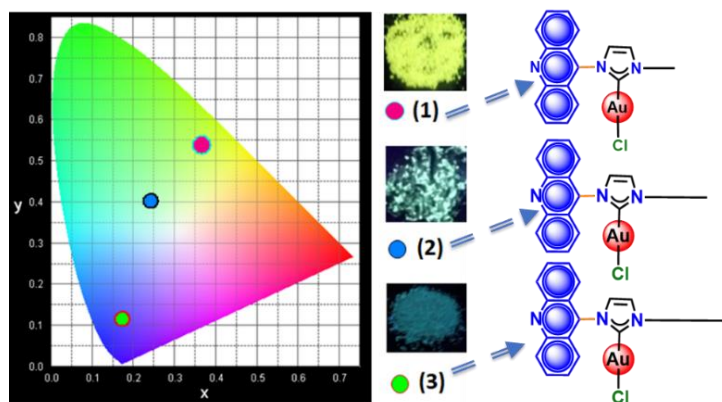
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The synthesis of *N*-heterocyclic carbene (NHC) gold complexes has recently attracted wide attention due to their considerable range of applications, in areas such as luminescent materials and medicinal chemistry, as well as their potential role as new catalysts in gold-catalyzed processes. For several years, NHC-gold materials have found many applications in the field of organic light-emitting diode. In the case of gold–NHC complexes two types of luminescent complexes could be distinguished: molecules showing native luminescence and enhancing luminescent after addition of organic chromophores. Thus we sought to extend our approach to non-chromophoric *N*-substituent, mainly alkyl chains. In fact, due to their flexible carbon-carbon rotation we expected them to promote unusual solid packing and hence add a novel property to this kind of compound relative to the rigid *N* substituents. As a result of our investigations, we have synthesized the new acridine substituted NHC-gold complexes with different *N*-alkyl chains to understand the photophysical and thermal properties, which will be discussed in detail.¹



- 1) M. Vaddamanu, A. Sathyanarayana, Y. Masaya, S. Sugiyama, O. Kazuhisa, K. Velappan, M. Nandeshwar, K. Hisano, O. Tsutsumi, G. Prabusankar, *Chem. Asian J.*, **2021**, 16(5), 521.