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AVVISO DI SEMINARIO

Lunedì 22 Gennaio alle ore 14.30
in aula Seminari del
Dipartimento di Scienze e Tecnologie Chimiche, il

Prof. Davide Bonifazi

School of Chemistry,
Cardiff University,
Cardiff CF10 3AT, UK

Terrà un seminario dal titolo:

Supramolecular Colorlands

Proponente: Prof. Silvia Licoccia

Supramolecular Colorlands

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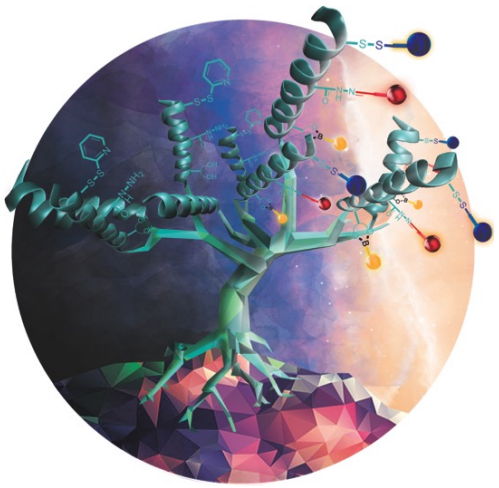
Abstract

One of the biggest problems in the fabrication of electroluminescent or light-adsorbing devices is the production of the desired color. White is usually obtained by mixing compounds with the three fundamental colors, namely red, green and blue (RGB). However, the choice of the suitable RGB compounds is limited by several factors in particular the chemical, electrochemical and photochemical stability of the selected compounds as well as their specific processability, which essentially means solubility and/or thermal evaporability, and self-organization capabilities. In this work, we show a new proof-of-concept toward the bottom-up construction of artificial light harvesting or luminescent materials that may exhibit any desired color, virtually enabling unlimited surfing through the color coordinate diagram. The approach allows the *i*) combination of RGB components in any desired and pre-programmed ratio at the molecular scale and *ii*) fine tuning the distance between different colors so as to modulate the extent of photoinduced energy transfer between the chromophores/luminophores with different excited state energies. These degrees of freedom, controlled solely through spontaneous supramolecular recognition will enable the tailoring of the desired emitted or adsorbed light color. In this work, we will address all the approaches undertaken in our laboratory to engineer single molecules and complex architectures expressing tailored colors.



References

Angew. Chem. Int. Ed., **2017**, *56,* 4483-4487; *J. Am. Chem. Soc.,* **2017**, *139,* 2710-2727; *J. Am. Chem. Soc.,* **2017**, *139*, 503–5519; *Chem. Eur. J.,* **2017**, *23*, 2363–2378; *Angew. Chem. Int. Ed.*, **2016**, *55*, 5947-5951; *Angew. Chem. Int. Ed.*, **2015**, *54*, 15739-15743.