**Liquid crystals for organic electronic devices**

Dr Mamatha Nagaraj

*School of Physics and Astronomy, University of Leeds, Leeds LS2 9BW, United Kingdom*

Liquid crystals are a class of materials that elegantly combine characteristics of the conventional solid and isotropic liquid. The most familiar application of liquid crystals is the liquid crystal displays or LCDs. Liquid crystals are also promising for organic electronic devices. Compared to their inorganic counterparts, liquid crystals can enable lower-cost, tuneable, biodegradable, lighter, thinner and flexible organic devices. In this presentation, an outline of some of the amazing complex molecular and supramolecular self-assembled structures formed by liquid crystals will be discussed. The current status of research and applications of liquid crystals in organic transistors and solar cells, the promises and challenges will be presented.