Theme : New Type Light-Emitting Material

- Sub Theme : Hydrocarbon-based Light Emitting Materials

Carbon dot is a carbon nano structure that is distinguished from graphene and nanotube. It is easier to be mass-synthesized with low cost compared to conventional quantum dots and has environmental friendliness. Recent researches on the development of carbon dots as light-emitting materials have been reported on solution processed OLEDs. Carbon dots are expected to be available for long-life blue luminescent materials when applied to the deposition type OLEDs. Accordingly, early development of carbon dots for thermal deposition is required.

We aim to find new hydrocarbon based light-emitting materials that can be thermally deposited and have excellent luminescent properties for use in OLEDs.

The topics we pursue through this GRO are as follows:

- Materials with thermal stability and proper molecular weight applicable to the deposition type OLEDs
- Materials with comparable QY and FWHM of phosphorescent dopants

※ The topics are not limited to the above examples and the participants are encouraged to propose original idea.

※ Funding : Up to USD $150,000 per year