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## Optical response materials design and synthesis: Sensor, LCD color filter, chromic and others

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The popularity of organic dye molecules in material science and chemical engineering has been rapidly growing, being enjoyed in the science and engineering field for various applications. The opto-based absorption and emission properties of organic chemosensor and LCD color filter dyes were prepared and discussed in terms of their model calculation approaches and empirical results in electron transfer systems. Studies on attractive absorption changing property of dye chromophore and fluorophore have been greatly enjoyed in the related industrial and research fields such as optoelectronics, chemosensor, LCD color filter and so on. The optical property based on intramolecular charge transfer system of dye molecules can be utilized as suitable sensing probes for checking media polarity and determining colorimetric chemosensing effect, especially hazardous parts detection. In this work, electron pushing-pulling system dye materials were designed and synthesized with the corresponding donor and acceptor groups. The selected donor moieties might be provided prominent amorphous properties which are very useful in designing and synthesizing functional polymeric molecules and in fabricating devices. Other reasons to choose are commercial availabilities in high purity and low price. Dye materials can produce impressive optical-physical properties, yielding them potentially suitable for applications in the synthesis of small functional organic molecules. Small organic functional molecules have unique advantages, such as better solubility, amorphous character and represent an area of research which needs to be explored and developed. Currently, their applications in metal organic compounds is rapidly expanding and becoming widespread in self-assembly processes, photoluminescence applications, chiral organocatalysts and ingrafts with nanomaterials.

### Biography

Young-A Son is currently working as a Professor at Chungnam National University, Daejeon, South Korea. He has attended many international conferences and published several papers in many international journals.

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