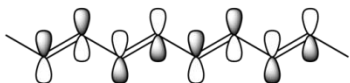


Development of Functional Materials Through Molecular Structure Control

Assistant Professor Hiroshi Katagiri

π -Conjugated compounds

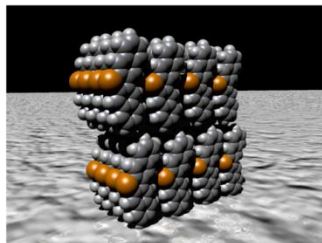


Acenes



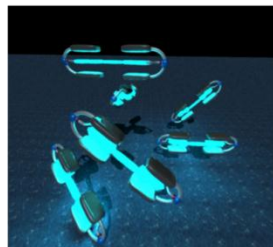
Aromatic oligomers

Self-assembly



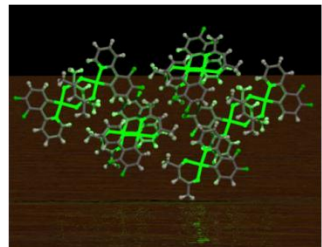
Organic field-effect transistors
Organic Photovoltaics

Monomeric form



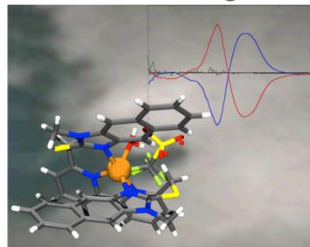
Fluorescent probes
Dye-sensitized solar cells

Solid-state emission



Organic Light Emitting Diodes
Light emitting transistors

Molecular recognition



Chemosensor

Content :

The research in our group focuses on the development of chiral technologies and organic optical materials. Our research projects integrate the disciplines of synthetic and structural organic chemistry, chiral chemistry, supramolecular chemistry, heterocyclic chemistry, and material science with the aim of construction of highly functional organic materials in such emerging fields as nanotechnology and biotechnology.

Design and synthesis of novel π -conjugated molecules and their application in optical/electronic devices and chemo-/biosensors are one of the most active areas of research both in academia and industry. Toward the accomplishment of the highly efficient and chemo-selective systems, we are investigating a range of potential applications of aromatic oligomers and acenes. In the study of photo-electro-active organic molecules, we are very interested in developing new methods to generate a well-defined assembly or to prevent aggregation in π -conjugated organic compounds. This allows the material to behave as OFETs or fluorescent probes.

Yamagata University Graduate School of Science and Engineering

Research Interest : Structural Organic Chemistry
Supramolecular Chemistry

E-mail : kgri7078@yz.yamagata-u.ac.jp

Tel (Tel & Fax) : +81-238-26-3743

HP : <http://katagiri.yz.yamagata-u.ac.jp/>

