

**A01-6**

# Science of Pseudo-X Conjugation in High Pressure and Photoexcited State Using Luminescent Organic Crystals

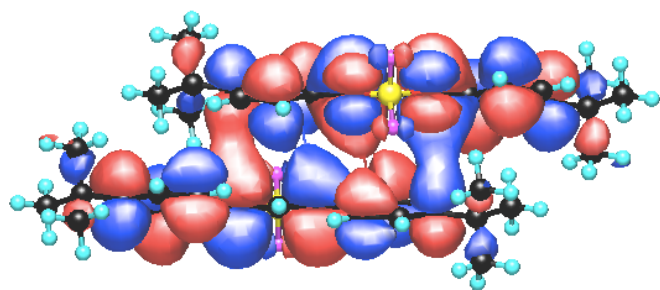
Principal investigator: Hiroshi Ikeda (Osaka Prefecture Univ)

**Our Mission: Realization of a new electronic conjugation in intermolecular spaces via precise design of molecules with minimum intermolecular distances**

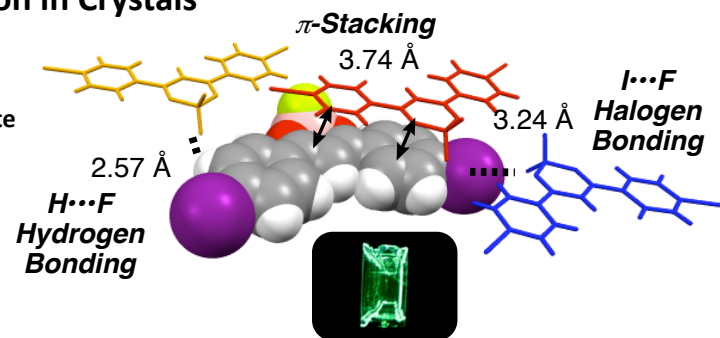
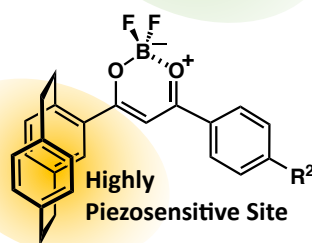
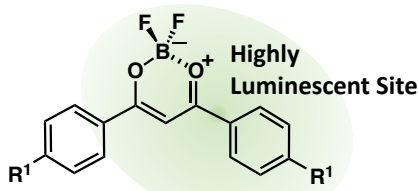
## Aims of A01-6

- Establishment of generality of new emission domain "Excited Multimer"
- Proposal of Wannier-type excitons for organic molecular crystals

### Pseudo-X Conjugation: Molecular Orbital Fusion in Crystals

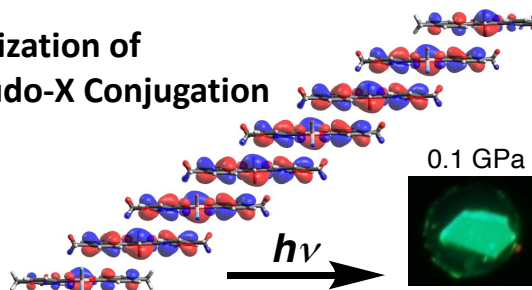


**Bimolecular model of "excited multimer"**

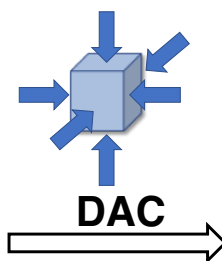


**Expression of Crystal phase complex interaction and room temperature phosphorescence**

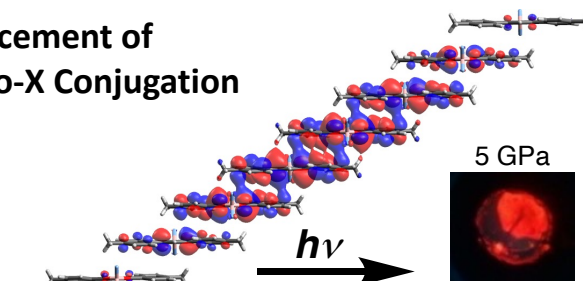
Realization of Pseudo-X Conjugation



**Multi-molecular model [normal pressure (+ photoexcited) state]**



Enhancement of Pseudo-X Conjugation



**Multi-molecular model [ultra pressure (+ photoexcited) state]**