

Report for newly appointed faculty startup

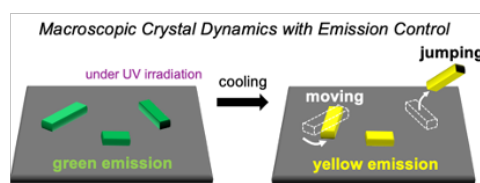
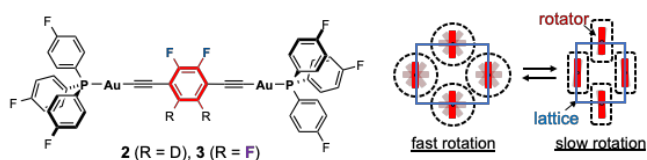
1. Name of project leader : **Mingoo Jin**

2. Project title: **Development of Novel Mechano-Responsive Luminescent Amphidynamic Crystals**

3. Report

The structural origin of multiscale phenomena, with physical manifestations ranging from the molecular to the macroscopic scale, remains largely undocumented. During this project term, we reported the discovery of a crystalline molecular rotor with rotationally-modulated triplet emission that displays macroscopic dynamics in the form of crystal moving and/or jumping, also known as salient effects.

Thanks to this start-up funding, we also could have progressed several further research projects, which are regarding on novel concept for manipulating molecular dynamics in solid state materials.



Jin, M.; Yamamoto, S.; Seki, T.; Ito, H.; Garcia-Garibay, M. A. *Angew. Chem. Int. Ed.*, **2019**, *58*, 18003.

4. Research achievement

Research paper:

1. **M. Jin**, S. Yamamoto, T. Seki, H. Ito, M. A. Garcia-Garibay, *Angew. Chem. Int. Ed.*, **58**, 18003 (2019).

Domestic or International Conferences

1. 錯体化学若手研究会 錯体化学若手の会夏の学校 2019 (2019.7.31-8.2. 栄屋ホテル、天童) 陳旻究 「分子回転を利用した固体発光および結晶の力学特性の制御」(口頭発表) (発表日: 2019.8.1. 栄屋ホテル、天童) 【招待講演】

2. The 14th International Conference on Cutting-Edge Organic Synthesis in Asia (ICCEOCA-14) (2019.9.26-29. ヒルトンビレッジ、ニセコ) Mingoo Jin 「Anisotropic Thermal Expansion/Compression as the Source of Microscopic and Molecular Scale Motion in Phosphorescent Amphidynamic Crystals」(ポスター発表) (発表日: 2019.9.27. Niseko Hilton Village, Japan)