

非対称ジアリールペリキサンテノキサンテンの合成と物性

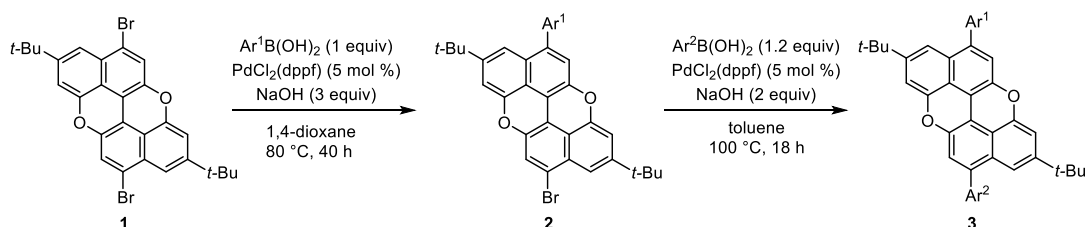
(奈良高専物創工) ○吉村 健一・南野 直人・亀井 稔之

Preparation of unsymmetrical diaryl-*peri*-xanthenoxanthenes and their properties (Department of Chemical Engineering, National Institute of Technology, Nara College) ○Yoshimura Kenichi, Naoto Minamino, Toshiyuki Kamei

peri-Xanthenoxanthene (PXX) derivatives are known as compounds that have thermal stability and high hole transportability¹⁾. We have recently reported C-H borylation as novel functionalization of PXX²⁾ However, cross-coupling reactions of diboryl-PXX could not be controlled to afford the only symmetric PXX derivatives, not unsymmetric them. In this report, we have studied synthesis of unsymmetric diaryl-PXX and their physical properties.

Keywords : *peri*-Xanthenoxanthene, donor-acceptor, cross coupling

ペリキサンテノキサンテン (PXX) 誘導体は、熱に安定かつ高いホール輸送性を示す化合物として知られている¹⁾。我々の研究室ではこれまで PXX 誘導化について研究を行っており、これまでにボリル化を報告した²⁾。しかし、ジボリル化体からは対称の誘導体しか合成できず、非対称の誘導化は達成できないでいた。本研究では PXX の非対称ジアリール化体の合成とその物性への影響について研究を行った。



entry	Ar ¹	yield (%)
1		40% (2a)
2		36% (2b)
3 ^a		36% (2c)

^aCs₂CO₃ was used instead of NaOH

entry	2	Ar ²	yield (%)
1	2a	3,5-Me ₂ (C ₆ H ₃)	46 (3a)
2	2a	<i>p</i> -BuO(C ₆ H ₄)	67 (3b)
3	2a	<i>p</i> -F(C ₆ H ₄)	44 (3c)
4	2b	3,5-Me ₂ (C ₆ H ₃)	73 (3d)
5	2b	<i>p</i> -BuO(C ₆ H ₄)	68 (3e)
6	2b	<i>p</i> -F(C ₆ H ₄)	90 (3f)
7 ^a	2c	3,5-Me ₂ (C ₆ H ₃)	78 (3g)
8 ^a	2c	<i>p</i> -BuO(C ₆ H ₄)	70 (3h)
9 ^a	2c	<i>p</i> -F(C ₆ H ₄)	87 (3i)

^aCs₂CO₃ was used instead of NaOH

- 1) Kobayashi, N.; Sasaki, M.; Nomoto, K. *Chem. Mater.* **2009**, *21*, 552-556.
- 2) Kamei, T.; Nishino, S.; Yagi, A.; Segawa, Y.; Shimada, T. *J. Org. Chem.* **2019**, *84*, 14354-14359.