ねじれ型分子内電荷移動発光を示すキサンテン誘導体の合成

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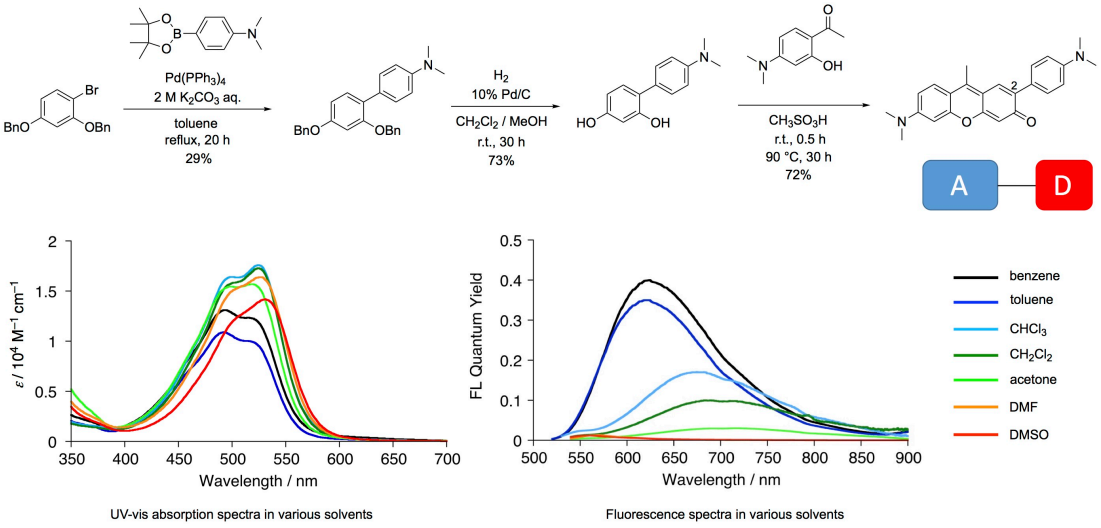
Synthesis of xanthene derivative exhibiting twisted intramolecular charge transfer emission ([1]*Graduate School of Engineering, Kyushu University*, [2]*Faculty of Science, Ymaguchi University*) ○ Taro Koide,[1] Shohei Iwamori,[1] Satoshi Koga[2], Yasutaka Suzuki[2], Jun Kawamata[2], Yoshio Hisaeda[1]

Xanthene derivatives are dyes that have been studied for a long time, but it is difficult to synthesize regioselectively modified derivatives and to control Stokes shift. In this study, we succeeded in synthesizing a new xanthene derivative showing twisted intramolecular charge transfer (TICT) by introducing a rotatable electron-donating aryl group at the 2-position of the xanthene skeleton selectively. It was clarified that this compound shows a large solvent effect on the changes of structural and luminescence characteristics.
Keywords : xanthene, twisted intramolecular charge transfer, solvent effect

キサンテン誘導体は古くから研究されている色素であるが、位置選択的に修飾した誘導体の合成や、ストークスシフトの制御などが難しい化合物群であった。今回、キサンテン骨格の 2 位に回転可能な電子供与性アリール基を選択的に導入することで、ねじれ型分子内電荷移動（TICT）を示す新規誘導体の合成に成功した。また、この化合物が大きな溶媒効果を示し、構造や発光特性の変化を示すことを明らかにしたので報告する。



UV-vis absorption spectra in various solvents　　Fluorescence spectra in various solvents

1) Synthesis of 2,6,9-substituted xanthen-3-one and solvent effect on structural and photophysical properties, T. Koide, S. Iwamori, S. Koga, Y. Suzuki, J. Kawamata, Y. Hisaeda, *Dyes and Pigments* **2020**, in press. Available online: https://doi.org/10.1016/j.dyepig.2020.108667