

「混乱から創造へ」 — 混乱型ポルフィリノイドの創製と展開

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“Creation from Confusion” — Synthesis and Development of Confused Porphyrinoids
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A serendipitous finding of a novel porphyrin isomer, **N-confused porphyrin (NCP)**, in 1994 triggered off the research on the confused porphyrinoid chemistry. NCP has a peculiar structure, one of the pyrrole rings in the macrocyclic framework is connected to the *meso*-methine carbon atoms through the α, β' -positions, providing an NNNC inner core and outward-pointing N at the periphery. As a result, unique and parallel research compared with the chemistry of regular porphyrin, including metal coordination, photochemistry, catalyst, supramolecular chemistry, etc., has been staggeringly developed. Furthermore, the synthetic strategy to introduce the confused pyrrole in the porphyrin macrocycles enables access to the new porphyrinoids (confused, neo-confused, fused, mis-linked, etc.) with “isomeric”, “expanded”, and “contracted” frameworks. This presentation will overview the synthesis, physical properties, metal complexation, and functional application of various confused porphyrinoids with typical examples.

Keywords : N-Confused Porphyrin; Porphyrinoids; Isomer; Metal Coordination; Analogues

ポルフィリン環を構成するテトラピロールの連結位置が異なるポルフィリン異性体、「N-混乱ポルフィリン (NCP)」の発見を契機にこれまで展開してきた、新規ポルフィリノイドの創製研究に関して、異性体、環拡張体、環縮小体に構造分類し、それらの合成、物性、錯体化、および機能応用について具体例を交えて紹介する。

