

RSC Applied Interfaces

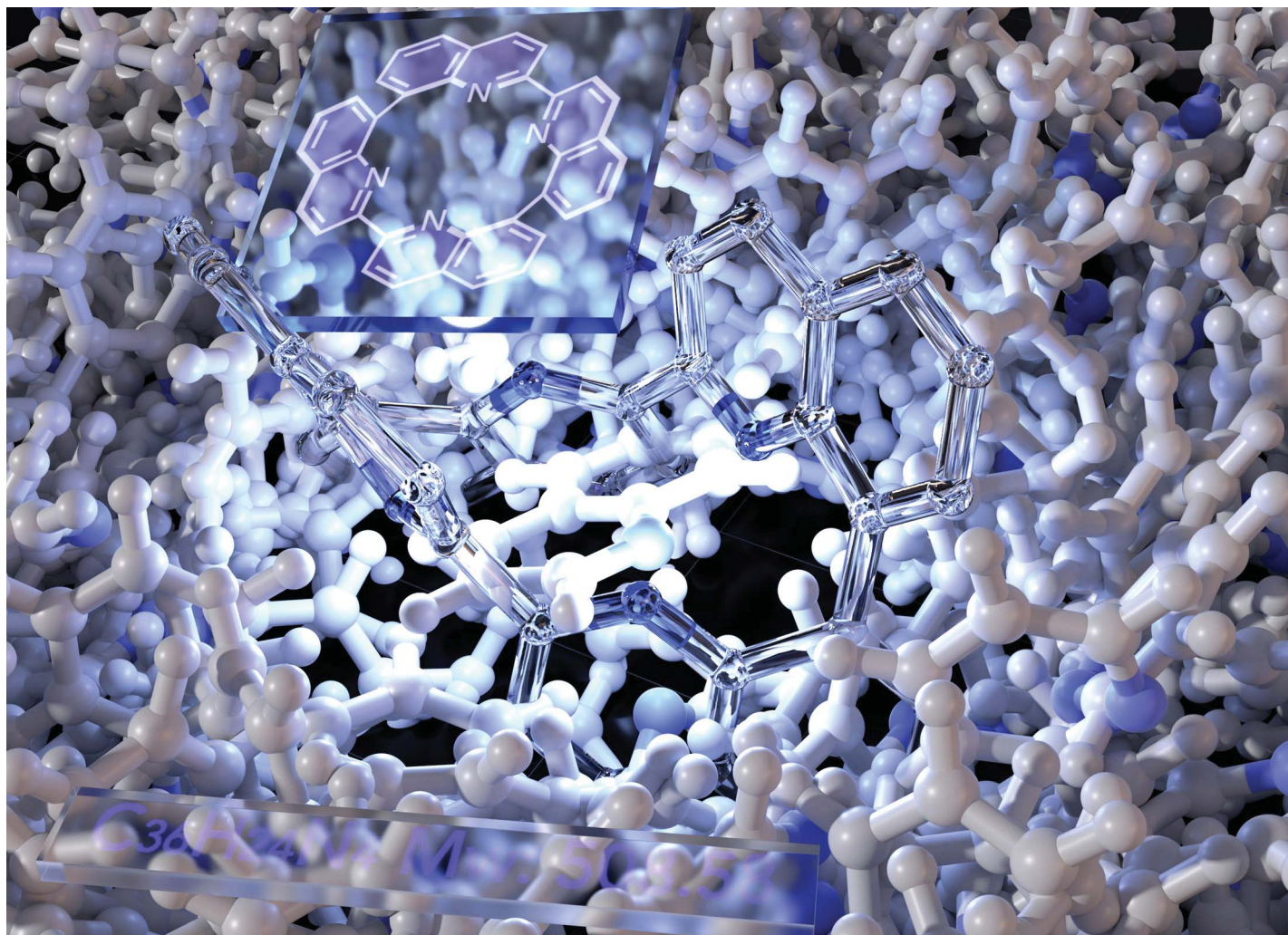
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**Interfacial and surface research
with an applied focus**

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**Fundamental questions
Elemental answers**



Showcasing research from Professor Kumagai's laboratory, Graduate School of Pharmaceutical Sciences, Keio University, Tokyo, Japan.

iso-TetraQuinoline (*i*-TEQ): an inherently chiral N4 macrocyclic quinoline tetramer

Cyclic concatenation of four quinoline units affords a fully sp^2 -hybridized, non-planar macrocycle featuring four inwardly oriented, coordinatively active pyridyl nitrogen atoms. The previously reported tetramer TEtraQuinoline (**TEQ**) exhibits head-to-tail connectivity of its quinoline units, affording an achiral architecture possessing S_4 symmetry. Herein, we report the design and synthesis of *iso*-TEtraQuinoline (***i*-TEQ**), an inherently chiral analogue featuring head-to-head connectivity at the 2,2'- and 8,8'-positions, which gives rise to a D_2 -symmetric architecture. Detailed comparative investigations of the connectivity isomers ***i*-TEQ** and **TEQ** revealed an array of distinct characteristics.

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As featured in:



See Naoya Kumagai *et al.*,
Chem. Sci., 2025, **16**, 10714.