

RSC Sustainability

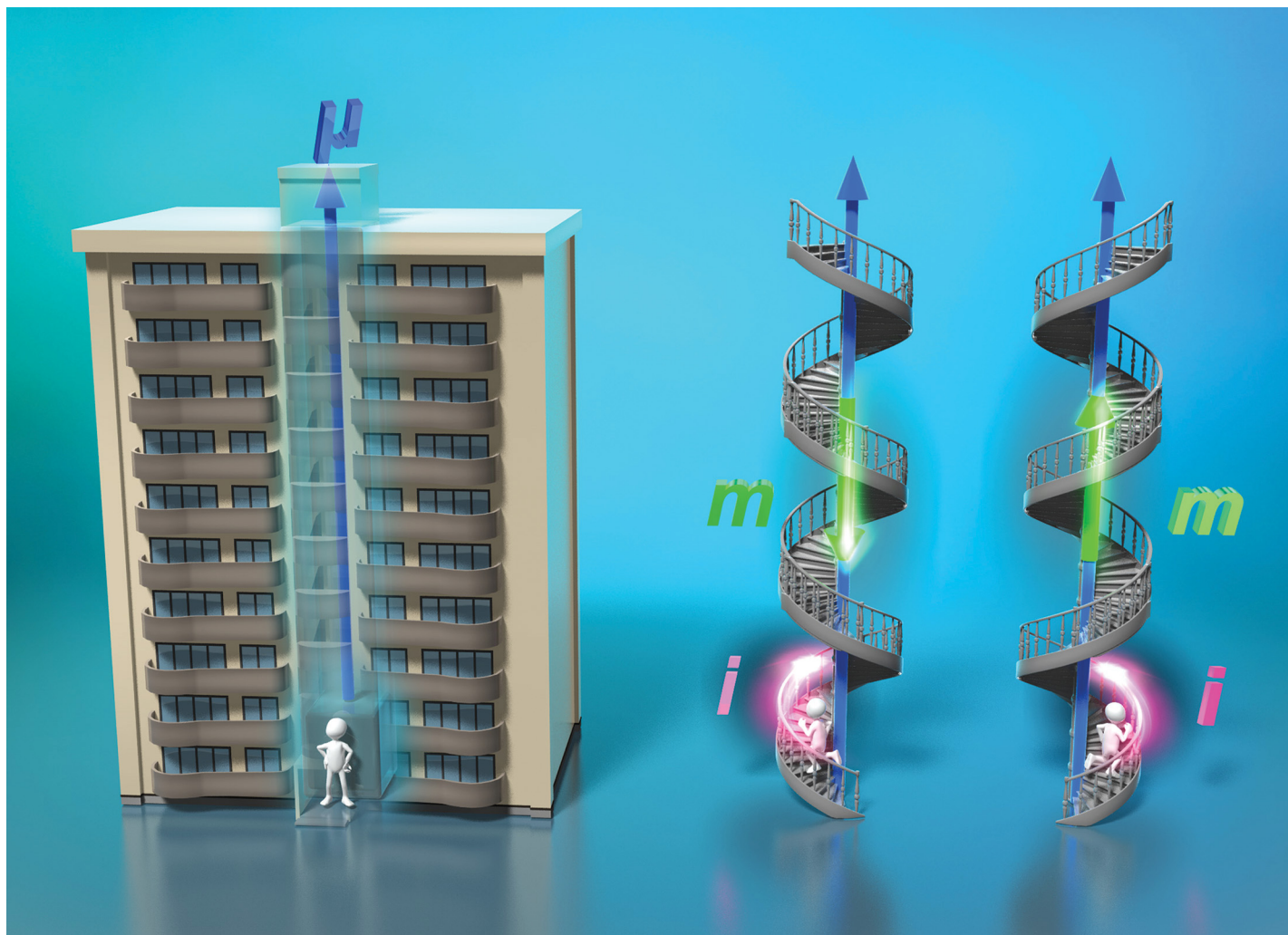
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Fundamental questions
Elemental answers



Showcasing research from the Group of Dr Ayumi Imayoshi and Prof. Kazunori Tsubaki at Kyoto Prefectural University

Inversion of circularly polarized luminescence by electric current flow during transition

This study proposes a methodology for predicting the magnetic transition dipole moment (m), critical for CPL activity, directly from molecular structures by focusing on the instantaneous current (i) during transitions. A classical loop model explains the CPL sign inversion caused by differences in substitution positions. If the electric dipole moment (μ) represents the "difference" in electron presence during transitions, like the directionality of taking an elevator upward, m reflects the "path" of electron flow, like the rotation of ascending a spiral staircase.

As featured in:



See Ayumi Imayoshi,
Kazunori Tsubaki *et al.*,
Phys. Chem. Chem. Phys.,
2025, **27**, 77.