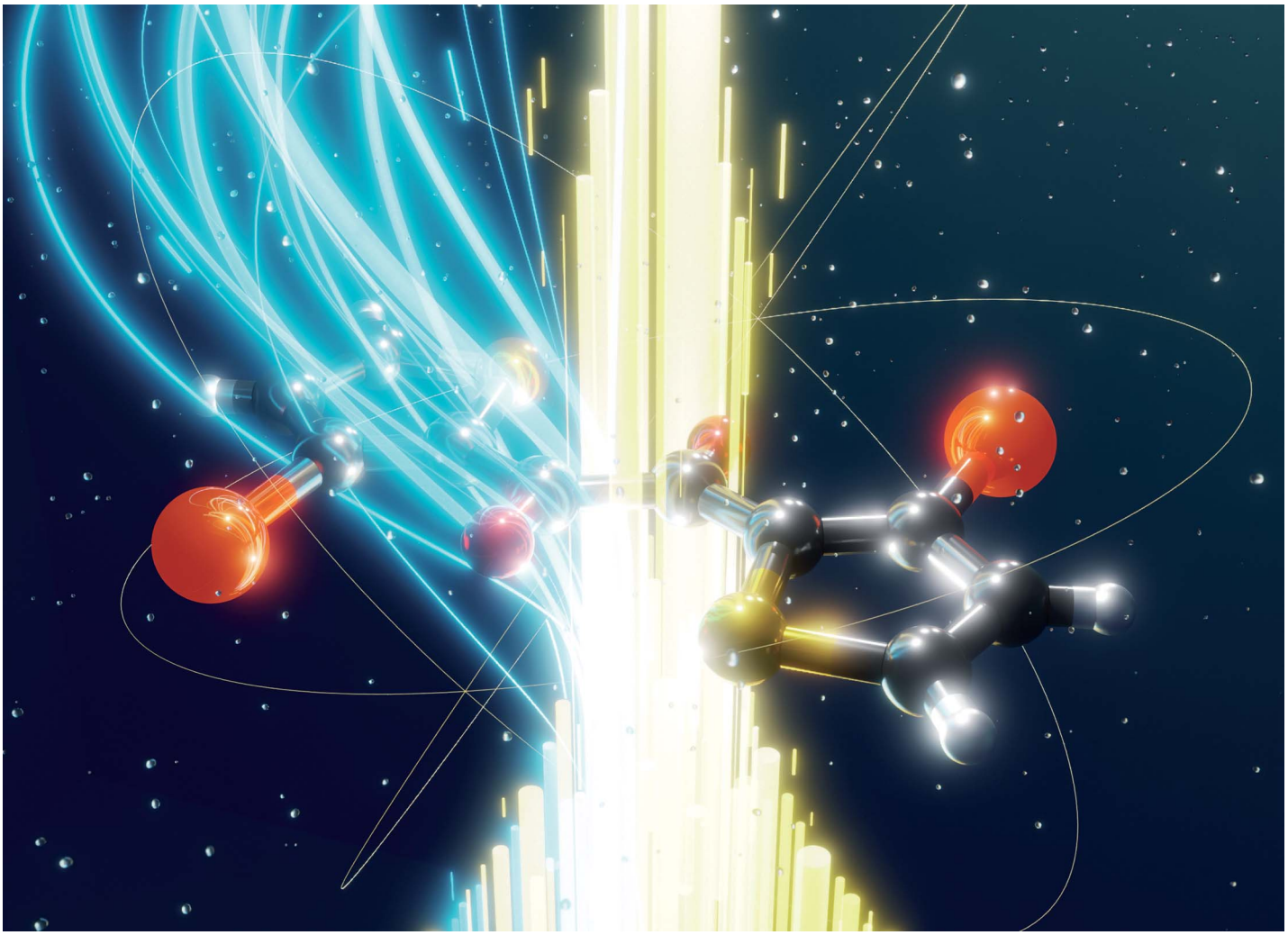

Showcasing research from Professor Tani's group, Department of Chemistry, Osaka University, Osaka, Japan, and Professor Miyata's group, Department of Chemistry, Kyushu University, Fukuoka, Japan.

Fast, efficient, narrowband room-temperature phosphorescence from metal-free 1,2-diketones: rational design and the mechanism

Fast room-temperature phosphorescence with high quantum yields up to 38% in solution from metal-free organic 1,2-diketones (the molecule in the image) are reported, along with the mechanism and molecular design principles governing the fast phosphorescence. This cover image depicts the key mechanism of the fast phosphorescence. The blue light rays come together into the molecule to generate bold yellow pillars, representing the acceleration of yellow phosphorescence through the mixing of high-lying singlet states.

As featured in:

See Yosuke Tani, Kiyoshi Miyata *et al.*, *Chem. Sci.*, 2024, **15**, 10784.

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