

## Choreographing molecular mobility – dominos, deracemization and directional rotation

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### Abstract

The lecture will describe the design and construction of families of molecules that undergo well-defined dynamic conformational changes – helix inversions, directionality reversals, and single bond rotations – along with a ‘user’s guide’ to some easily applied analytical methods for quantifying the kinetic and thermodynamics of these dynamic processes. Coherent control of these types of molecular motion can be used to create biomimetic functions. Examples will include the transmission of information through membranes, the translation of molecular messages into chemical reactivity, and the catalytic induction of out-of-equilibrium behaviour leading to directional rotation – the first redox-driven synthetic molecular motors.

### References

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