Poster

Molecular symmetry and art: visualizing the near-symmetry of molecules in Piet Mondrian's *De Stijl*

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The concerted movement of atoms in conjugated systems can produce chiral arrangements of chromophores, but how do we display the resultant symmetry? Our exploration of coordinate transforms in crystallography[1-2] led to a depiction of molecular symmetry and movement which was strongly informed by the work of Piet Mondrian, a pre-eminent Dutch artist of the modernist era. Mondrian's artworks and writing show a fascination with symmetry in scientific and artistic contexts. Our recently published work [3] extends this motif to show the symmetry of molecules as areas of colour, complementary to usual ORTEP diagrams, to display and interrogate the emergent chirality of chromophores, hosts, ligands and electroactive materials, among others.

I will present the *scsd* method of quantifying molecular chirality from crystal structure data, and examine an interplay evident between artistic and scientific conceptions of symmetry. This should serve as an example of how art may influence and inform the communication and understanding of scientific ideas.

Figure 1. Illustration by Ella Marushchenko

[1] Kingsbury, C.J., Senge, M.O., *Coord. Chem. Rev.* **2021**, *431*, 213760. https://doi.org/10.1016/j.ccr.2020.213760.

[2] Kingsbury, C.J., Senge, M.O., Preprint, https://doi.org/10.26434/chemrxiv-2024-6b25s

[3] Kingsbury, C.J., Senge, M.O., *Angew. Chem. Int. Ed.* **2024**, e202403754.