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Demonstrated enantioselective adsorption with cobalt 1D coordination polymers

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Chiral coordination polymers have recently been explored as potential stationary phases for enantioselective separations.¹ However, the chiral resolution ability of non-porous coordination polymers is not often tested.

In this work, two chiral 1D cobalt coordination polymers have been synthesised with an amino acid functionalized diimide ligand. The coordination polymers, which have little free pore space, have been tested for their chiral resolution abilities with 1-phenylethanol. Coordination polymer 1 shows a preference for one enantiomer over the other in both soaking experiments and preliminary 'mini columns', whereas a second structurally similar polymer shows no enantioselectivity thus far. Analyses are currently underway to further probe the chiral separation ability of the systems.

References

1 Turner, D. R., Chirality in Network Solids. In Chirality in Supramolecular Assemblies: Causes and Consequences, Keene, R. F., Ed. 2016

Level of Expertise

Student

Presenter Gender

Woman

Pronouns

Which facility did you use for your research

Australian Synchrotron

Students Only - Are you interested in AINSE student funding

No

Do you wish to take part in the Student Poster Slam

No

Condition of submission

Yes

Primary author(s) : CAO, Winnie (Monash University)

Co-author(s) : TURNER, David (Monash University); MISSEN, Owen (Monash University)

Presenter(s) : CAO, Winnie (Monash University)

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