CURRICULUM VITAE

Emma Helen Wolpert

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Education

2013 - 2017 MChem, University of Oxford, Chemistry (First Class)

MChem Project: Emergence of Polarisation in Disordered Systems

Supervisor: Prof. Andrew Goodwin

2017 - 2021 DPhil (Inorganic Chemistry), University of Oxford

Project: Structural analogues of complex magnetic phases

Supervisor: Prof. Andrew Goodwin

Research experience

2019 Chimie Paris Tech, PSL Research University (Paris, France)

Supervisor: F. X. Coudert

I spent four months in Paris as part of my DPhil to learn DFT calculations and ab

initio molecular dynamics simulations.

2021 - Postdoctoral Research Associate, Imperial College London

Supervisor: Prof. Kim Jelfs

Academic Honours

2015 - 2017 New College Academic Scholarship

2017 Part II Thesis Prize (Inorganic Chemistry)—Best thesis
2018 Poster prize—Physical Crystallography Group & Structural

Condensed Matter Physics

2017 - 2020 Hertford College Graduate Scholarship

Journal Publications

- 1. Hybrid local-order mechanism for inversion symmetry breaking **EH Wolpert**, AR Overy, PMM. Thygesen, A Simonov, MS Senn, AL Goodwin, *Phys. Rev. B* **97**, 134106 (2018).
- 2. Function from configurational degeneracy in disordered framework materials EM Reynolds, **EH Wolpert**, AR Overy, L Mizzi, A Simonov, JN Grima, S Kaskel, AL Goodwin *Faraday Discuss.* **225**, 241-254 (2021).
- 3. Controlling anisotropic properties by manipulating the orientation of chiral small molecules J Wade, F Salerno, RC Kilbride, DK Kim, JA Schmidt, JA Smith, L LeBlanc, **EH Wolpert**, A Adeleke, E Johnson, J Nelson, T Mori, KE Jelfs, S Heutz, MJ Fuchter *Nature Chem.* (2022), DOI:10.1038/s41557-022-01044-6.
- 4. Into the unknown: how computation can help explore uncharted materials space AM Mroz, V Posligua, A Tarzia, **EH Wolpert**, KE Jelfs *J. Am. Chem. Soc.* **144**, 18730-18743 (2022).
- 5. Modelling the effect of defects and disorder in amorphous metal-organic frameworks I Bechis, AF Sapnik, A Tarzia, **EH Wolpert**, MA Addicoat, DA Keen, TD Bennett, KE. Jelfs, *Chem. Mater.* **34**, 9042-9054 (2022).
- 6. Coarse-grained modelling for predicting the packing of porous organic cages **EH Wolpert*** and KE Jelfs*, *corresponding author *Chem. Sci.* **13**, 13588-13599 (2022).
- 7. Observation of Rare Tri6Di9 Imine Cages Using Highly Fluorinated Building Blocks T Fleck-Kunde, **EH Wolpert**, L zur Horst, R Oestreich, C Janiak, KE Jelfs, BM Schmidt *Organic Materials* **4**, 255-260 (2022).

8. The effect of disorder in multicomponent covalent organic frameworks.

EH Wolpert,* A. Tarzia, KE Jelfs*, *corresponding author, DOI: 10.21203/rs.3.rs-2361409/v1

9. Skyrmion lattices in chiral metal-organic frameworks

EH Wolpert, FX Coudert, AL Goodwin, DOI: 10.26434/chemrxiv.12515594.v1

10. On the polytypism of layered MX2 materials

EH Wolpert, SJ Cassidy, AL Goodwin, DOI: 10.48550/arXiv.2302.01016

11. Structure and dynamics of the negative thermal expansion material Cd(CN)2 under pressure CS Coates, M Baise, JM Bulled, **EH Wolpert**, JW Makepeace, HC Walker, AS Gibbs, DA Fortes, B Slater, AL Goodwin DOI: 10.48550/arXiv.2302.09963

Oral Presentations

Invited	
April 2019	British Crystallographic Association Spring Meeting (Nottingham)
Aug 2022	American Chemical Society Fall meeting (Chicago, USA)
International	
Feb 2020	Correlated Disorder workshop (Herzberg, Switzerland)
Jul 2021	FEZA 2021 (Virtual)
Aug 2021	IUCr 2021 (Hybrid conference, Prague, Czech Republic)
Aug 2021	IUCr 2021 (Hybrid conference, Prague, Czech Republic)
Aug 2022	American Chemical Society Fall meeting (Chicago, USA)
National	
Nov 2017	Physical Crystallography Group & Structural Condensed Matter Physics (Abingdon)
Mar 2018	British Crystallographic Association Spring Meeting (Warwick)
Jan 2020	Frontiers in Condensed Matter Physics Conference (Bristol)
Dec 2021	RSC Solid State Chemistry Christmas Meeting (Virtual)
June 2022	UKPormat (Glasgow)
Oct 2022	Imperial College London Departmental Seminar
Dec 2022	MASC (Nottingham)

Poster Presentations

Nov 2016	Physical Crystallography Group & Structural Condensed Matter Physics (Abingdon,
	England)
May 2018	European Doctoral Symposium on Metal-Organic Frameworks
	(Raitenhaslach, Germany)
Aug 2018	European Crystallography Meeting (Oviedo, Spain)
July 2018	Aperiodic 2018 (Des Moines, Iowa, USA)
Nov 2018	Physical Crystallography Group & Structural Condensed Matter Physics (Abingdon,
	England)
Apr 2019	Conference on Analysis of Diffraction Data in Real Space (Grenoble, France)
Aug 2019	European Crystallography Meeting (Vienna, Austria)
Oct 2019	CZ-UK Workshop on Nanomaterials (Prague, Czech Republic)
Jul 2021	FEZA 2021 (Virtual)
Aug 2021	IUCr 2021 (Hybrid conference, Prague, Czech Republic)
June 2022	GRC crystal engineering (Maine, USA)
Sept 2022	Design, synthesis and application of next-generation organic semiconductors
	(London, England)
Sept 2022	Leverhulme Research Centre Symposium (Liverpool, England)

Summer Schools

July 2018	PCG Intensive School in Physical Crystallography
Aug 2018	Physics by the Lake Summer School (Windsor, UK)
Aug 2019	MaThCryst satellite meeting (Vienna, Austria)

Teaching Experience

2017-2018 2017-2018	Junior Demonstrator Inorganic Chemistry Laboratory, University of Oxford Graduate Tutor maths for chemistry, Jesus College, University of Oxford
2018	Graduate Teaching Assistant physical chemistry, New College, University of Oxford
2018-2019	Non Stipendiary Lecturer in maths for chemistry, St. Anne's College, University of Oxford
2018-2019	Non Stipendiary Lecturer in maths for chemistry, Oriel College, University of Oxford
2018-2019	Non Stipendiary Lecturer in maths for chemistry, St. Catherine's College, University of Oxford
2020	Non Stipendiary Lecturer in Inorganic chemistry, St. Catherine's College, University of Oxford

Supervision

2019- Supervised a summer project student, two masters students, and a PhD student.

Professional Activities

2022	Co-organised the "Design, synthesis and application of next-generation organic
	semiconductors" conference (London, England)
2022-	Reviewer for Journal of American Chemistry Society and Crystal Growth & Design
2022-	Member of the American Chemical Society
2021-	Member of the Royal Society of Chemistry
2019-2021	Committee Member of the Young Crystallographers' Group
2017-2021	Member of the British Crystallographic Association
2018-2021	Member of the European Crystallographic Association