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EDUCATION

01.11.2017 – 27.11.2021: University of Edinburgh, EDINBURGH

PhD, Chemistry

(Funded by Turkish Ministry of National Education, Law no. 1416, Associated Institute: Izmir Institute of Technology, Material Engineering, Izmir, Turkey)

Dissertation title: "An Exploration of Structure–Property Relationships in Nitropyrazoles Using Co-crystallisation and High Pressure"

Key modules: X-ray crystallography, X-ray/neutron diffraction at extreme conditions, polymorph investigation, energetic materials, co-crystallisation and salt formation, structure-property relationships of energetic materials.

Supervisor: Prof. Colin R. PULHAM

09.2014 – 10.2016 : Karamanoglu Mehmetbey University, KARAMAN

Master's of engineering, Bioengineering

Dissertation title: "Purification and crystallization of *Aspergillus terreus* NRRL 1960 xylanase and determination of its biomass hydrolysis performance" (TUBITAK-3501-Career Project, as a postgraduate student with scholarship)

Key modules: Enzyme crystallization, biochemistry, enzyme purification.

Supervisor: Assoc. Prof. Didem SUTAY KOCABAS

09.2007 – 06.2012: Yildiz Technical University, ISTANBUL

Bachelor's degree, Chemical engineering

Dissertation title: "Adsorption of heavy metal ions by using fly ash received from thermal reactors in different regions"

Project title: “Designing a n-Buthanol Production Facility” (Final year design project.)

2003 – 2006: Karaman Science High School, KARAMAN

LANGUAGE SKILLS

English: Languages English – Advanced (for all skills)

IELTS: Overall: 6.5 (Listening:6.5, Reading:6.5, Writing:6.5, Speaking:6.5, year: 2016)

YDS: 76.25

11.2016 – 04.2017: International House of London - Pre-advanced Language Certificate

PROJECTS

- 1- **A High Pressure Study of Para-Xylene**, STFC ISIS Neutron and Muon Source, Didcot, Oxfordshire, UK.

Date of experiment: 18 October 2019, <https://doi.org/10.5286/ISIS.E.RB1920618-1>

Date of experiment : 12 September 2019, <https://doi.org/10.5286/ISIS.E.RB1920618-2>

Date of experiment: 22 October 2019, <https://doi.org/10.5286/ISIS.E.RB1920618-3>

- 2- **A High-Pressure investigation on 3,4,5-Trinitropyrazole**, STFC ISIS Neutron and Muon Source, Didcot, Oxfordshire, UK.

Date of experiment: 16 December 2019, <https://doi.org/10.5286/ISIS.E.RB1920623-1>

Date of experiment: 18 October 2019, <https://doi.org/10.5286/ISIS.E.RB1920623-2>

PUBLICATIONS

- 1- **“Characterization and properties of a novel energetic Co-crystal formed between 2,4,6-Trinitrophenol and 9-Bromoanthracene”** Journal of Molecular Structure 1192 (2019), 145-153. <https://www.sciencedirect.com/science/article/pii/S0022286019305204?via%3Dihub>
- 2- **“New Promising Insensitive Energetic Salts formed between Picric acid and 2,3-diaminotoluene, 2,4-diaminotoluene: Synthesis, Characterisation and Performance”** Journal of Molecular Structure 1205, 5 April 2020, 127580. <https://www.sciencedirect.com/science/article/pii/S0022286019316898?via%3Dihub>
- 3- **“High-pressure characterization of 3,4,5-trinitropyrazole”** Conference paper, NTREM ‘20 Seminar on New Trends in Research of Energetic Materials, Czech Republic, 2020. https://www.ntrem.com/download/NTREM2020_proceedings_CD.pdf , page 26.

- 4- Manuscript in preparation: "Exploring the structure-property relationship of TNP at high-pressure"

CONFERENCES, POSTERS and PRESENTATIONS

26.02.2018: ISIS Neutron and Muon Source - Neutron Training Course / ISIS Neutron and Muon Source, Science and Technology Facilities Council, Didcot, Oxfordshire, UK./ Poster presentation: "Co-Crystal Engineering of Energetic Materials"

18-20.04.2018: New Trends in Research of Energetic Materials / University of Pardubica, Pardubica, Czech Republic.

02-08.06.2018: Gordon Research Seminars and Conferences on 'Energetic Materials' / Grand Summit Hotel at Sunday River Newry, ME, USA / Poster presentation: "Co-crystallisation of Nitropyrazoles"

30.05.2019: Joseph Black Conference / Appleton Tower - University of Edinburgh / Poster presentation: "Co-crystallisation and Structural Studies of Pyrazole-Based Energetic Materials"

9-11.06.2019: The 10th Crystal Forms Meeting / University of Bologna - Italy / Poster presentation: "Co-crystallisation and Structural Studies of Pyrazole-Based Energetic Materials" (**Cryst Eng Comm. – Royal Society of Chemistry - OUTSTANDING POSTER PRESENTATION PRIZE**).

28.06.19: Research Update Oral Presentation / Cavendish Laboratory – Cambridge / "Co-crystallisation and Structure-Property Relationship Studies of Pyrazole-Based Energetic Materials"

25-26.08.2020: Neutron Scattering Group Early Career Meeting / Science and Technology Facilities Council, Didcot, Oxfordshire, UK. / Oral presentation: "High-Pressure Characterisation of 3,4,5-Trinitropyrazole"

WORKSHOPS/TRAININGS

26.02.2018 – 08.03.2018: ISIS Neutron and Muon Source - Neutron Training Course / Rutherford Appleton Laboratory - Oxfordshire, UK.

06.04.2019 – 14.04.2019: 17th BCA/CCG Intensive Teaching School in X-Ray Structure Analysis / Durham University - Department of Chemistry, Durham, UK.

LAB. DEMONSTRATIONS/SUPERVISIONS

09.2018 – 11.2018: Undergraduate Laboratory Demonstration - Inorganic Chemistry 2 (50 hours demonstration, 20 hours marking).

09.2018 – 12.2018: Day to day supervision of an Honours project student (Co-crystallisation and X-ray diffraction studies of nitropyrazole-based energetic materials).

09.2019 – 12.2019: Postgraduate Laboratory Demonstration - Materials Chemistry (28 hours).

10.2019 – 05.2020: Day to day supervision of an Honours project student (Synthesis and co-crystallisation of 4-chloro-3,5-dinitropyrazole).

REFERENCES:

Prof. Colin R. PULHAM – University of Edinburgh, School of Chemistry.

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Prof. Carole A. MORRISON - University of Edinburgh, School of Chemistry.

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