

Chemistry in ACTION

NOV
13
2023

Chemistry in Action

For A level and IB students

Join us for an amazing day of exhilarating chemistry which will take students from key concepts learnt in the classroom to the latest advancements in chemical research! Through five engaging sessions students will meet experienced scientists from academia and industry and be inspired to become the scientists of the future.

Each day also includes a special session on examination success that will ensure students are equipped with the tools they need to excel. There will be plenty of interactivity throughout the day, with polls, quizzes and (of course) your chance to question the scientists – join us at Chemistry in Action this autumn!

Host: Alex Baker (*Organic Chemist, University of Warwick*)

- [Amazing Atoms: Nuclear Science Can Change the World](#)
- [Waste Crime: How Chemical Forensics Might Solve Our Big Waste Problem](#)
- [Electrifying Chemistry in the Microbial Realm](#)
- [Nanoexplorers: imaging the invisible](#)
- [From Enemies of Eden to Neglected Tropical Disease - New Approaches for Snake Bite Diagnosis](#)



King's House Conference Centre,
Manchester,
Manchester,
M1 7HB



Venue: £22 +VAT *

Plus one COMPLIMENTARY staff ticket per 10 students.

*VAT may be reclaimable. Please check with your finance department

Education in Action is the leading provider of inspirational, informative, Education in Action study days for A-level, IB, BTEC and GCSE students.

Award-winning, world-class speakers

Cutting-edge content

Thought-provoking demos and presentations

Examination hints, tips and guidance

Modestly priced to offer access to all

Complimentary staff ticket for every 10 students booked

Bookings can be amended up to 28 days before the event day

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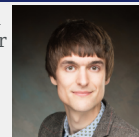
Amazing Atoms: Nuclear Science Can Change the World /

Tim Gregory – Nuclear Scientist



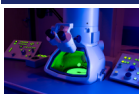
Nuclear science has the power to solve some of the greatest challenges, from achieving net zero, to curing cancers in new ways, to exploring outer space. Atoms may be small, but they can change the world.

Tim is a nuclear chemist whose lab work takes him to the forefront of clean energy production, nuclear medicine research, and space exploration. With a PhD in meteorite science he has appeared on BBC4's The Sky at Night and the BBC2 series Astronauts: Do You Have What It Takes?



Nanoexplorers: imaging the invisible /

Sarah Haigh – Professor of Materials, University of Manchester



"Materials are like people – it's their defects that make them interesting". But often the defects that dictate materials performance are at the scale of single atoms and are beyond the imaging capabilities of light microscopes. This talk will explain how electrons are being used to reveal the secrets of materials at the atomic scale.

Prof Sarah Haigh is an electron microscopist. Her group apply atomic imaging to accelerate development of quantum electronics and new materials for sustainable energy production. She has appeared on BBC4's Horizon and was featured setting fire to pencils on BBC2's Inside the Factory while 7 months pregnant.



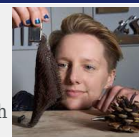
Waste Crime: How Chemical Forensics Might Solve Our Big Waste Problem /

Anna Ploszajski – Materials Scientist, Writer and Storyteller



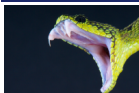
18% of all waste in the UK is illegally managed. The waste crime economy in England alone is estimated to be worth £1 billion a year, as profitable as drug trafficking, but without the same sanctions. Join materials scientist Dr Anna Ploszajski to see how chemical forensics is being used to catch the culprits and bring them to justice.

Anna Ploszajski is a materials scientist, author, presenter and science comedian who is on a mission to get people fascinated by the ordinary stuff which makes up the world around us. Her book Handmade tells the story of materials through their use in arts and crafts.



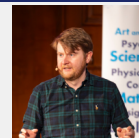
From Enemies of Eden to Neglected Tropical Disease – New Approaches for Snake Bite Diagnosis /

Alex Baker – University of Warwick



Every 5 minutes, 50 people are bitten by a snake worldwide. 4 will be permanently disabled. 1 will die. Snake envenomation is a neglected tropical disease that requires urgent attention. Explore the relationship between humans and snakes, discover the influence this has had on the modern medicine cabinet and how chemistry can help fight against tropical diseases.

Alex is an organic chemist with a particular interest in carbohydrates, polymers and nanoparticles. His work is used to design medical diagnostics with a particular focus on the developing world and fighting health inequalities.



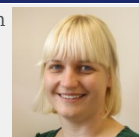
Electrifying Chemistry in the Microbial Realm /

Alison Parkin – University of York



Journey into the microbial world and explore the cutting-edge research that is harnessing electron flow for biofuel catalysis and reprogramming bacterial DNA to produce mutant enzymes with optimised activity. Discover how the combination of chemical synthesis, computational analysis and novel measurement techniques are propelling scientific exploration.

Alison grew up in East Yorkshire before studying in Oxford for an MChem, then PhD/DPhil in Chemistry, falling in love with metal containing enzymes. She did a Merton College Junior Research Fellowship (Oxford, 2008-2012) before starting her own bio-chem research group in beautiful York.



Education in Action

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