



11 AM WEDNESDAY 9 DECEMBER

Venue: Faculty Board Room,  
Robertson Building (46)

Speaker: Dr. James Murray  
BBSRC David Phillips Research Fellow  
Imperial College London



### For further information

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for more information  
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with the Speaker

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**Abstract:** Living organisms are exquisitely ordered and complex, and this complexity and order extends down to the precise positions of individual molecules and atoms. The proteins and enzymes of life form nanomachines of great power. Our knowledge of how these nanomachines work has been revolutionised over the last 50 years by X-ray crystallography, which allows the determination of precise atomic structures. If a protein can be induced to crystallize, the atomic coordinates of all the constituent atoms can be determined. I will outline the process of determining a crystal structure.

One of the most important biological processes on Earth is photosynthesis, in which light, water and carbon dioxide are used to make oxygen and organic matter. Thus all the fossil fuels we burn, the food we eat, and the air we breath are due to photosynthesis. I will describe some of the macromolecular structures associated with this amazing process.