FORMULATIONS

Industrial research using Diamond

The eternal dream to explore matter at its deepest level has continually driven scientists to build more and more powerful instruments from simple microscopes to elaborate X-ray sources.

Diamond Light Source is a sophisticated synchrotron light facility which can generate highly intense beams of light ranging from IR and UV to X-rays, all of which are making research at the cutting-edge of modern science possible. Diamond provides specialist analytical techniques for the atomic to microscale characterisation of materials as diverse as novel pharmaceuticals, catalytic materials, coatings, motor oils, and large engineering components.

Our dedicated Industrial Liaison Team of highly skilled scientists is available to support you in every step of your research. The team can help to translate your R&D challenges into meaningful analytical solutions by making use of its diverse expertise in synchrotron methods.

Some examples of how Diamond can be used for formulations research and development are outlined overleaf.

diamond.ac.uk/industry

Applications

Pharmaceuticals

- Stability and phase behaviour of excipients;
- Root-cause analysis and trouble-shooting;
- Characterisation of antibodies, biopharmaceuticals, antibody complexes;
- API and formulation characterisation.

Food

- Structural and chemical investigations of processes;
- Chemical mapping of raw materials;
- Imaging of food microstructures, networks, crystallisation and phase behaviour.

Consumer Products

- Long-term stability of formulations;
- Phase behaviour of new, sustainable ingredients and rheological modifiers;
- Packaging materials.

Oil/Energy

- Controlling crystallisation and analysis of nano-particulate systems;
- Investigation of friction and wear phenomena;
- Mimic use-cycle conditions and study chemical and microstructure evolution during processing.

SF-FOR-017-2

For further information

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