In harsh, ancient and distant environments, recognizing the remains of life can be extremely difficult. In these settings our usual techniques fall down and ways must be developed that allow records of past life to be recognized when only small amounts of sample and residual fragments of organic records remain.

The Imperial College Organic Geochemistry group has unique techniques for the detection and recognition of life. The project will apply those techniques to both well understood and contentious samples to establish the limits of life detection science and to understand the record in ancient Earth rocks, Mars analogues and meteorite samples.

The PhD project will position the student to work on the science of our ancient Earth and to contribute to future instrument teams for missions to Mars and to the Icy Moons of the outer planets. The research will use analytical chemistry equipment in the Imperial College Organic Geochemistry Laboratories (right). Full training will be provided. The project would suit an applicant who is enthusiastic about geochemistry, the origin and distribution of life and space missions.

The ideal candidate will have a background in Earth Science, Chemistry, Planetary Science or a subject that develops similar skills. Contact: Professor Mark Sephton (m.a.sephton@imperial.ac.uk) for more information. Details of how to apply can be found at: http://www.imperial.ac.uk/study/pg/apply/how-to-apply/