# EPSRC supported EngD Development of sustainable hair conditioning technologies

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## Procter & Gamble

## Tax free bursary of £ 25,000 plus fees paid

Hair conditioning is an essential process to our daily life, whereby a layer of formulated product is deposited on hair surface, resulting in desirable benefits. Its global market was ~ 9.14 Billion USD in 2021, and has a significant impact on not only the wellbeing of human, but the environment. The chemical compounds deposited on hair fibres include fatty alcohols, polymers, surfactants, and emollients. They are designed to alter hair surface characteristics, e.g. friction and adhesion, in delivering superior consumer satisfaction.

The aim of this proposal is to develop sustainable hair conditioning technologies, which includes the following objectives: to establish a mechanistic understanding of the interaction between sustainable compounds and hair surface, to investigate the frictional characteristics of the resulting surface deposit, and to recommend on technologies with enhanced sustainability profile and consumer delight.

Working closely with the industrial partner at P&G, the EngD candidate will develop a wide range of knowledge and skills in Colloidal and Interface Science, Tribology, and establish a broad appreciation of Formulation Engineering. They will build a portfolio of transferrable skills such as project management, communication, team working, which ensures an excellent employability upon completion of the project.

If you have a background in Chemistry, Physics, Material, or Chemical Engineering, and are passionate about Sustainability and Consumer Goods, this is an excellent opportunity.

To be eligible for EPSRC funding candidates must have at least a 2(1) in an Engineering or Scientific discipline or a 2(2) plus MSc. To apply please email your cv to [cdt-formulation@contacts.bham.ac.uk](mailto:cdt-formulation@contacts.bham.ac.uk). This projects is open to UK and international students. For details on the Engineering Doctorate scheme visit the homepage.

**Deadline: 12th April 2024**