# EPSRC supported EngD. Mechanisms and Factors Affecting Deposition in Automatic Dish Wash and Drying – Substrate Understanding

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## Procter & Gamble

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

Effective, residue free washing has long been a result sought by automatic dishwasher users. Understanding the different processes and mechanisms in the wash phases of an automatic dishwashing cycle, which lead to the formation of spots and filming on dishware is important to enable the development of superior automatic dishwashing products and ensure consumer delight. This becomes critical as colder and shorter cycles become the norm, as part of the initiative of enhancing sustainability.

This project aims to 1) identify the surface mechanisms and dynamics of the formation, prevention, and removal of both organic and inorganic films, spots, and deposits on dishware at the end of the wash during the drying process and 2) Enable scalability by correlating macro scale techniques with full scale dishwashers.

The researcher will join an extensive collaboration between P&G and UoB. The individual will benefit significantly from the interactions with P&G team members consisting of a broad range of research and development experiences. Laboratory skills including essential chemistry and engineering lab practice, alongside chemical and physical characterization techniques.

Additionally, summer school and conferences organized specifically for the EngD students will be an excellent opportunity to exchange research experience. The researcher will be encouraged to participate international conferences and training schools though which the transferrable skills such as communication will be developed.

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). Currently we are only able to accept UK nationals. For details on the Engineering Doctorate scheme visit the [homepage](http://www.birmingham.ac.uk/schools/chemical-engineering/postgraduate/eng-d/index.aspx).

**Deadline: 12th April 2024**