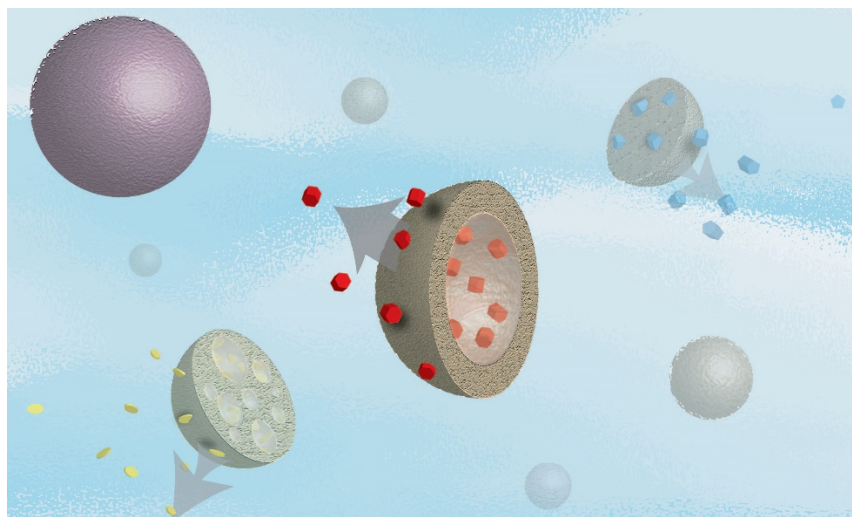


Two Master thesis projects available in a research collaboration  
Chalmers – Swerea IVF – IKEA of Sweden

## Triggered release from microcapsules



*Schematic of the release from different types of microcapsules.*

Microencapsulation of active substances in core-shell particles or *microcapsules* has found use in a wide range of industrial sectors such as the pharmaceutical, food, health-care and coating sector to name a few. In the research facilities at the Division of Applied Chemistry we have long experience in encapsulating actives in microcapsules to be used for controlled release from functional coatings.

**Project 1** will focus on finding suitable polymers that immediately respond to an external trigger, specifically UV irradiation. The polymer should also appropriately meet the conditions of some applied processes, namely the formulation of core-shell particles and the associated encapsulation of active substances all including the ambition of large-scale production.

**Project 2** will focus on the formulation of microcapsules using UV-responsive polymers. The microcapsules will be characterized by light microscopy and the triggered release will be investigated using irradiation by UV-light. Analytical quantification of the released actives will also be an essential part of the project.

Both parallel thesis projects will be performed at the Department of Chemistry and Chemical Engineering at Chalmers in close collaboration with Swerea IVF and IKEA of Sweden.

Start: as soon as possible, latest January 2017.

### Contact

Lars Nordstierna | Associate Professor | [lars.nordstierna@chalmers.se](mailto:lars.nordstierna@chalmers.se) | [www.chalmers.se](http://www.chalmers.se)  
Charlotte Ireholm | Researcher | [charlotte.ireholm@swerea.se](mailto:charlotte.ireholm@swerea.se) | [www.swerea.se](http://www.swerea.se)