

The Erasmus+ programme is a fantastic opportunity to enrich the educational and research background of the involved institutions (IF PAN and Imperial College London) aiming at promoting European integration in research and education. This research stay lasted for a full working week starting from the 7th of March. The hosting institution is particularly successful in receiving and integrating researchers from all over the world following the highest standards in all aspects related to a visit of this kind. Hence, we had fantastic results at different levels, which will benefit both myself and IF PAN in the short and longer term.

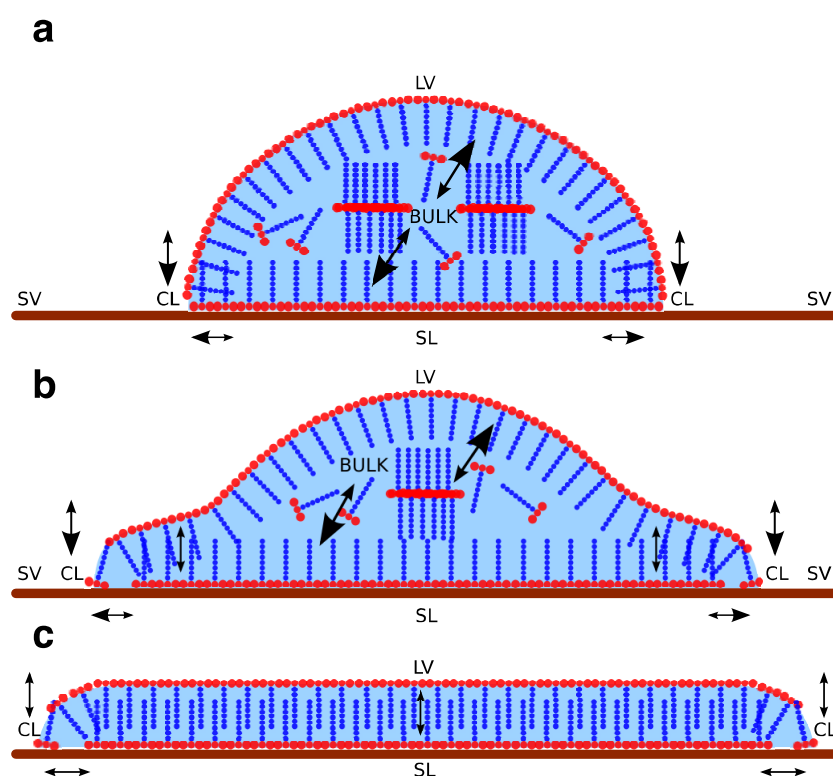


Figure 1. Different stages of the superspreading mechanism for surfactant-laden aqueous droplets from a to c. Arrows indicate the direction and the magnitude of the main adsorption processes in the droplet at each stage. The bilayer formation is part of the superspreading mechanism. (from Theodorakis, Müller, Craster, and Matar, *Soft Matter* 11, 0254 (2015))

During this stay, Imperial College London has provided me with all the benefits of a full academic visitor position, which had facilitated all my activities across the college and not only within a single department or the hosting group. This shows the great opportunities and infrastructure that Imperial College has in place to realise its expectations for staff and visitors in the best possible way. As a result, apart from the fantastic seminars and workshops running the whole week at the college, I had the opportunity to build bridges

with a number of academics and researchers from different departments. The result of this experience is a common review paper with the hosting team on a new topic to be published towards the end of this year, and the plan to submit common grants with different research teams in different research areas. Moreover, I was invited to attend the summer school of the fluid dynamics centre for doctoral training and deliver a talk in July, which shows the good cooperation and strong links with the hosting department on a longer-term basis.

A significant part of my stay was dedicated to research. Together with the hosting group we have worked on describing theoretically the superspreading of surfactants. My previous work based on computer simulation methods has elucidated the mechanisms of this phenomenon, which have been investigated for the last almost 60 years. The figure illustrates the different stages of superspreading and the various adsorption mechanisms playing the most important role at each stage. However, we have now a theoretical framework that provides a simple description and further ability to push the borders of science in this area further by studying theoretically the behaviour of surfactant-enhanced spreading droplets. We are currently working on publishing these results in a high impact journal in the field. My interaction with other groups has also lead to collaborative work with molecular dynamics simulations and classical density functional theory on soft condensed matter systems, which will also be finalised towards the end of this year.

During this stay, I also had the opportunity to acquire new skills in the arena of multi-scale computer simulations from the top researcher in this field in the hosting group of Prof. Matar. Through this interaction, we have developed an excellent relation, which branches out in a new common project and collaborative grants.

In summary, this programme has enhanced my skills at different levels far beyond research technical skills. The choice of the host institution played a significant role as a place of excellence in research, teaching, and education, providing a stimulating environment. The research stay resulted in considerable research output in the form of publications and future research grants, which will be finalized and submitted towards the end of this year and an invited talk. My interaction has built a long-term collaboration with the hosting institution, which goes beyond this research stay.