

Interfacial Rheology of Plant Proteins

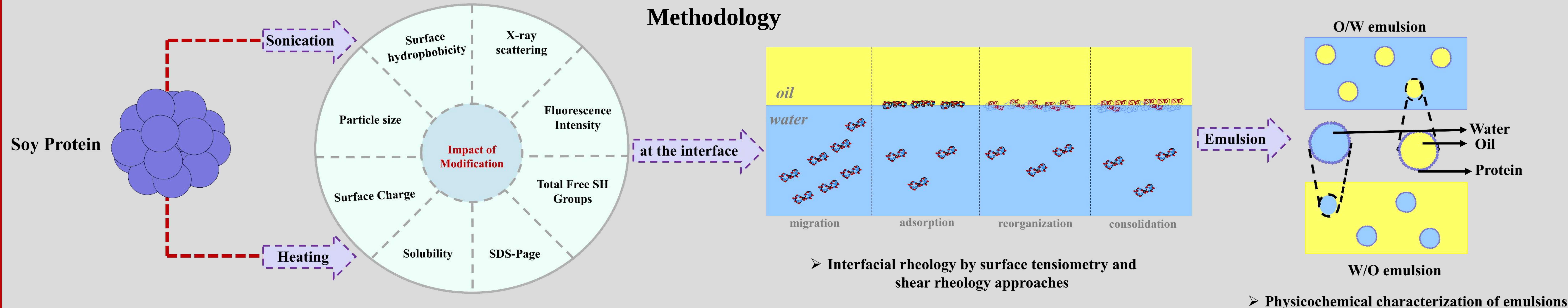
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Hypothesis

- Plant proteins form weaker interfacial films due to their compact structure and lower interfacial activity.
- By tuning physicochemical properties of these proteins via sonication and heating can help improve their interfacial behaviour.
- These modified proteins can provide enough stability to the liquid-liquid interfaces for emulsion preparation.

Introduction

The interfacial properties of plant proteins provide useful insight into the formation and stabilization of emulsions. These interfacial properties depend strongly on structural properties of protein (e.g., molecular flexibility, surface hydrophobicity, and state of sulfhydryl groups) and bulk conditions (e.g., ionic strength, pH, and protein concentrations). Limited literature is available on structural modifications of plant proteins via heating and sonication and their impact on improving interfacial rheology. Therefore, this study is proposed to structurally modify soy protein by heating/sonication and its applications to develop stable emulsions/foams.



References

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