

# **Emulsification: Comparison of experiment and theory**

**S. Tcholakova, N. Denkov, I. Ivanov**

Laboratory of Chemical Physics & Engineering,  
Faculty of Chemistry, Sofia University, Sofia, Bulgaria

## **Aim of the study**

**To reveal the main factors determining the mean drop size for systems, in which the processes of drop breakage and drop-drop coalescence occur simultaneously during emulsification.**

## **Contents**

- 1. Analysis of the parameters affecting the elementary processes**
  - ❑ Drop breakage – interfacial tension and average power density.**
  - ❑ Drop-drop coalescence – surfactant adsorption, electrolyte concentration, oil volume fraction.**
- 2. Analysis of the competition between drop breakage and coalescence, based on a simple theoretical model.**