

## Intermittent dynamics of bubble dissolution due to interfacial growth of fat crystals – Supplementary Figures

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## SUPPLEMENTARY FIGURES

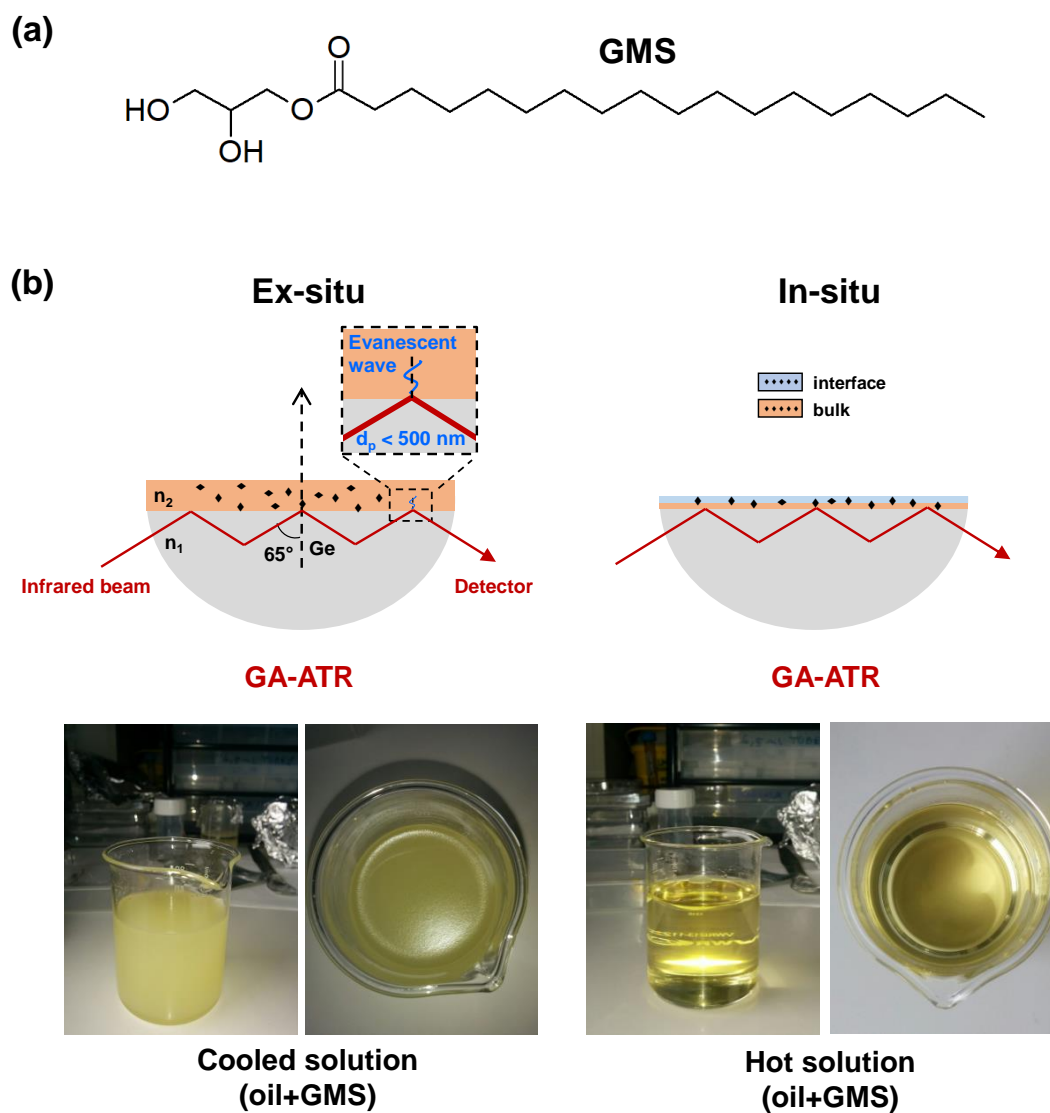


FIG. 1. (a) Chemical formula of glycerol monostearin (GMS), the main component of the “Dimodan HR” powder (Danisco); (b) Protocol of the GA-ATR experiment using the *ex situ* and *in situ* approaches.

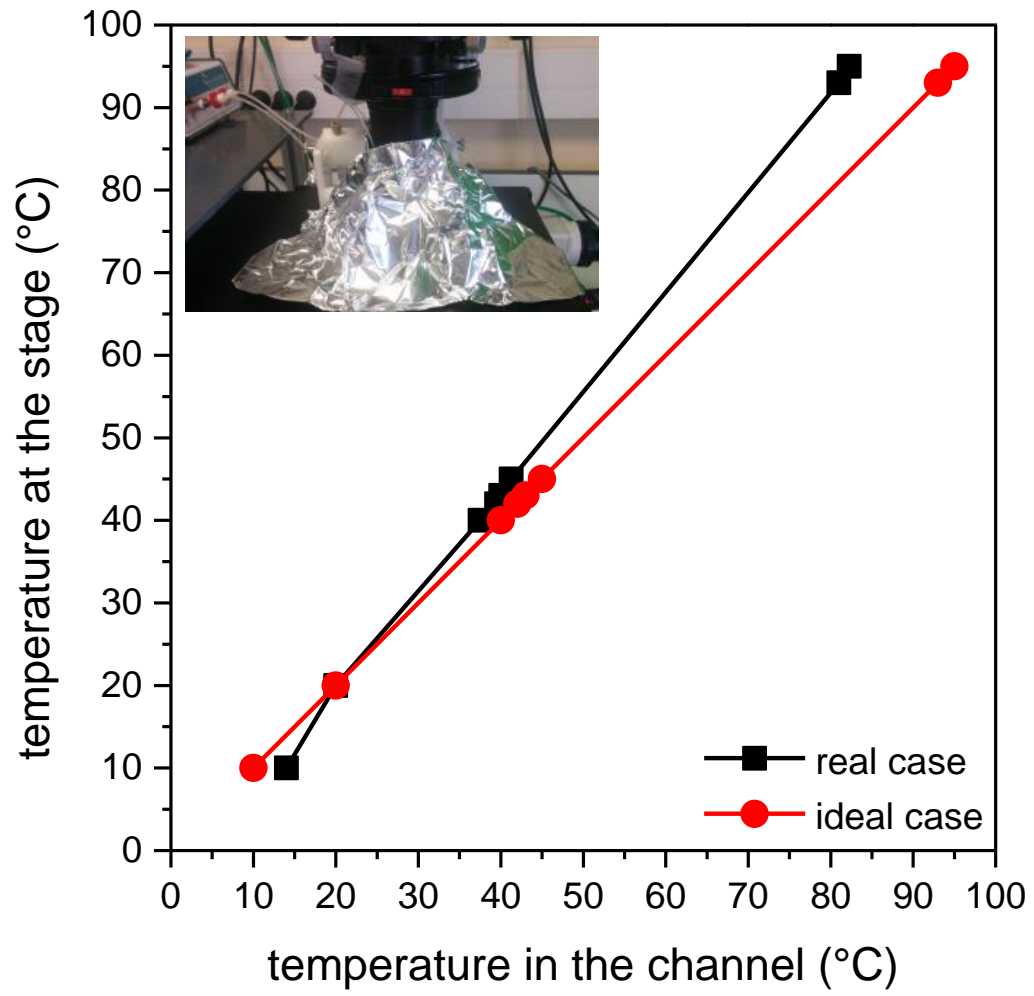


FIG. 2. Calibration curve for the temperature.

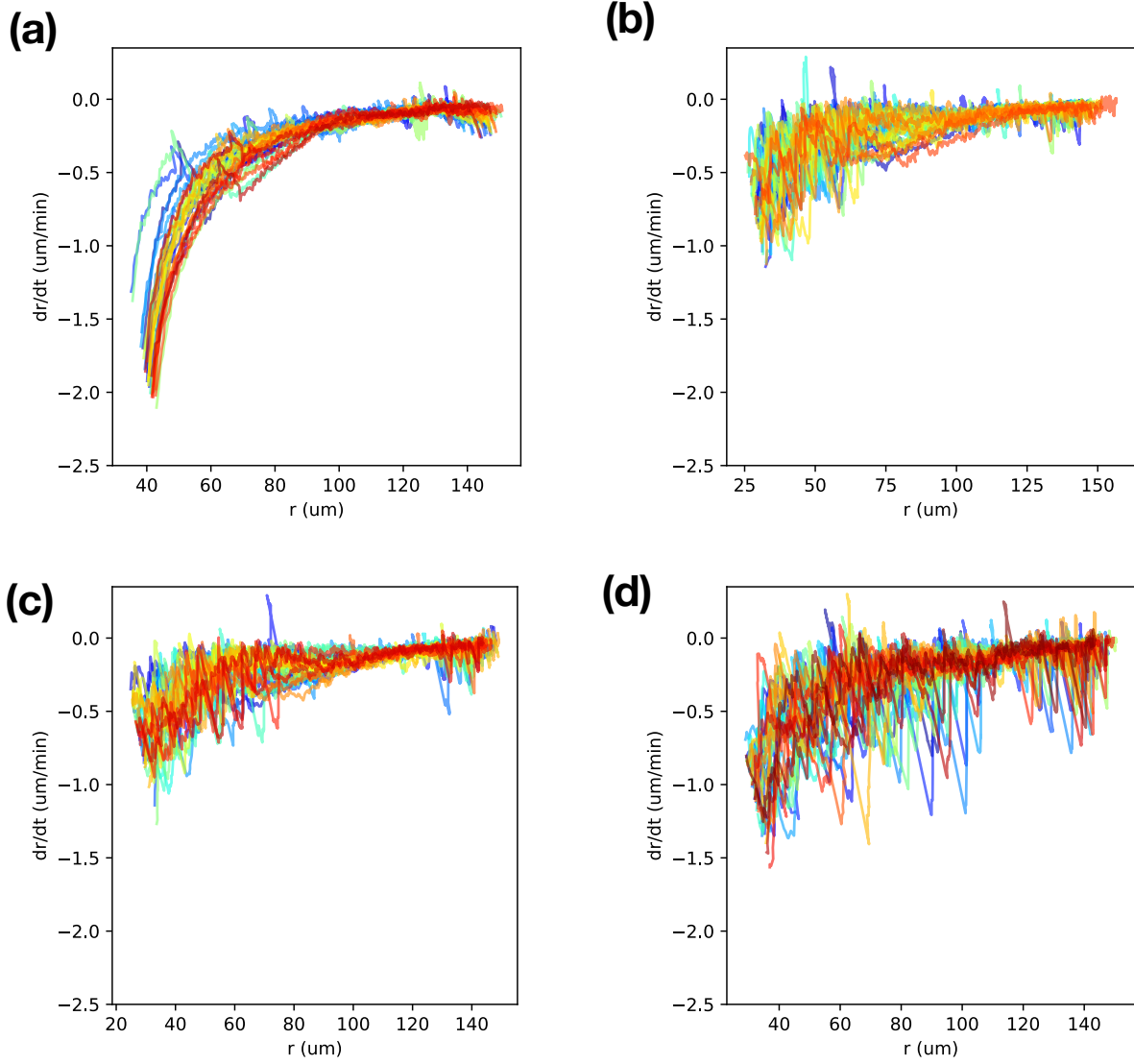


FIG. 3. Evolution of  $\dot{R}$  as a function of  $R$ , for air bubbles (a) in pure oil, (b) in oil with 1% small fat crystals, (c) in oil with 2% small fat crystals, (d) in oil with 2% large fat crystals.

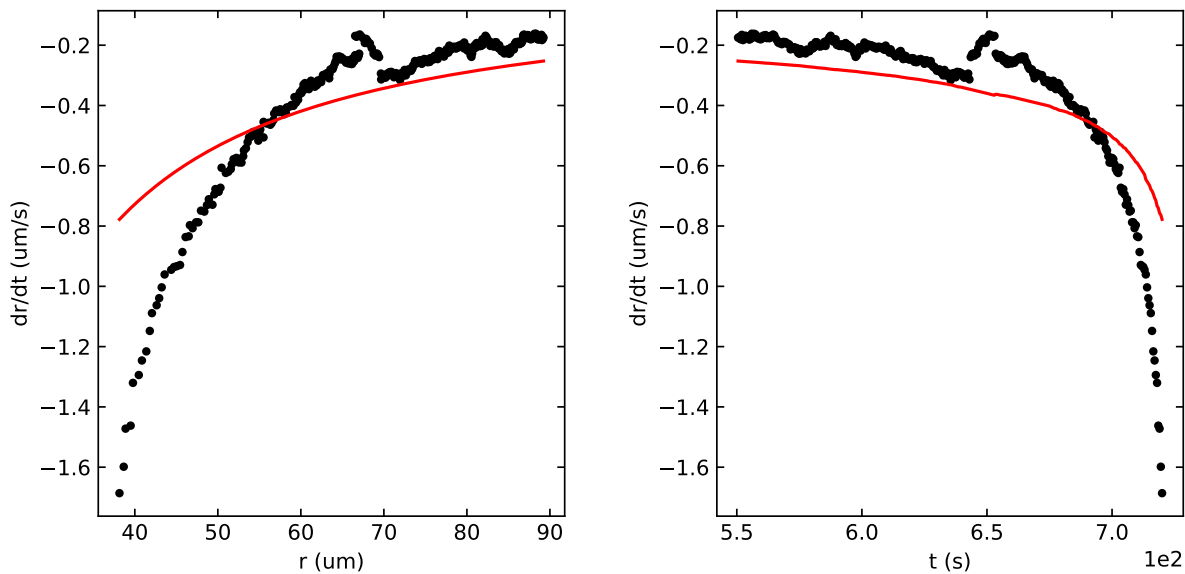


FIG. 4. Evolution of (a)  $\dot{R}$  as a function of  $R$ , and (b)  $R$  as a function of time  $t$ , for a bubble in pure oil. Black points: experimental data. Red line: best fit to the original Epstein-Plesset equation, with only one fit parameter,  $f$ . The fit is very poor.

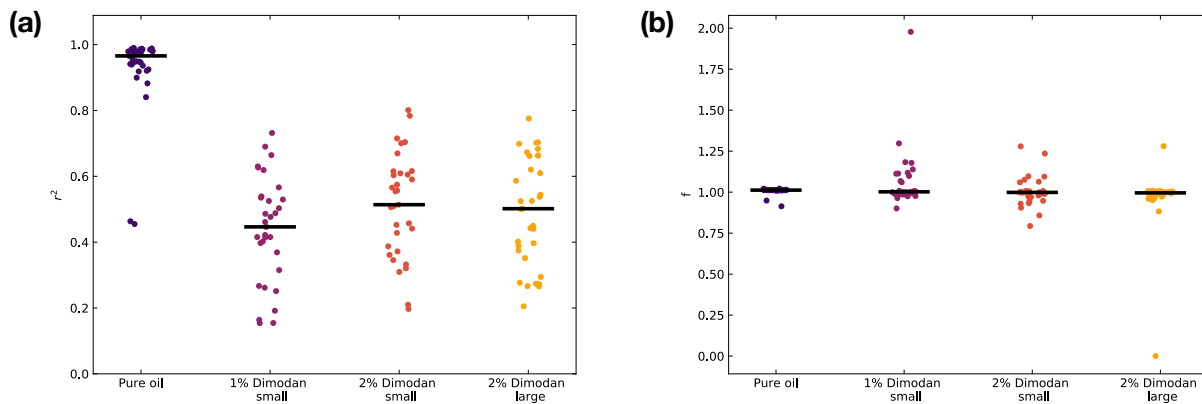


FIG. 5. (a) Values of the coefficient of determination  $r^2$  for fits to the Epstein-Plesset equation. (b) Values of the fitted value of  $f$ , the fraction of dissolved gas in the liquid at initial times compared to its saturation value for a flat interface.

**SUPPLEMENTARY MOVIES**

- **Supplementary Movie 1** shows the dissolution of an air bubble in pure oil.
- **Supplementary Movie 2** shows the dissolution of an air bubble in oil containing 2% fat crystals.
- **Supplementary Movie 3** shows the dissolution of an air bubble in oil containing 2% fat crystals, together with the evolution of the bubble radius.