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Thermocapillary delay of drop coalescence MICHELA GERI, GARETH MCKINLEY, MIT- Department of Mechanical Engineering, JOHN BUSH, MIT - Department of Mathematics — We present the results of a combined experimental and theoretical investigation of drop coalescence. Particular attention is given to elucidating how the time to coalescence, or residence time, is affected by a temperature difference between drop and bath. Experiments show that the residence time increases as the temperature difference to the 2/3 power. This simple scaling is rationalized through consideration of the thermal Marangoni flows induced.

Michela Geri
MIT- Department of Mechanical Engineering

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