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Coalescence dynamics of a droplet on a heated pool PANKAJ KOLHE, PAVAN KUMAR KIRAR, Indian Institute of Technology Hyderabad, India, KATHRYN ALVARENGA, Texas A&M University, KIRTI SAHU, Indian Institute of Technology Hyderabad, India — We experimentally investigated the coalescence dynamics of an ethanol drop in ethanol pool maintained at a higher temperature than the drop. The size of the impacting drop and the temperature difference between the pool and the drop are varied and their effect on the secondary droplet formation has been studied. It is observed that increasing the temperature of the liquid pool, has a non-monotonic effect on the partial coalescence phenomenon. Increasing the droplet size increases the size of the secondary drop for all values of the temperature differences considered in the present study.

Kirti Sahu
Indian Institute of Technology Hyderabad, India

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