عنوان مقاله:

On the Dynamic Behavior of a Liquid Droplet Impacting upon a Wall Having Obstacles

محل انتشار:

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خلاصه مقاله:

In this paper, the effects of a step edge and a stationary droplet on the dynamic behavior of a droplet impacting upon a wall are experimentally studied. The main parameters were the distance from the step edge to the center of the impacting droplet and the center-to-center distance between the stationary and impacting droplets. Photographic images showed the coalescence dynamics, shape evolution and contact line movement of the impacting droplet. The spread length is presented for the step edge and two coalescing droplets. The droplets exhibited much different dynamic behavior depending on the location of the step edge. The momentum of the impacting droplet was better transferred to the stationary droplet as the center-to-center distance between the two droplets was reduced, resulting in more spreading of the coalescing droplet.

کلمات کلیدی:

Coalescence, Impacting droplet, Stationary droplet, Step edge