

Abstract Submitted  
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**Measurement of charge of a droplet induced by contact electrification** DONGWHI CHOI, HORIM LEE, Department of Mechanical Engineering, POSTECH, Korea, DO JIN IM, Department of Chemical Engineering, POSTECH, Korea, KWAN HYOUNG KANG, Department of Mechanical Engineering, POSTECH, Korea — The contact electrification is the charge transfer between two surfaces by contact and separation. We have developed the experimental method to measure the amount of charge of a droplet induced by contact electrification. In the method, the uniform electric field is applied to a droplet suspended in dielectric oil. The horizontal movement of a droplet is determined by the balance between electric and drag force. The drag force exerted on a droplet has been calculated by Hadamard-Rybczynski solution. The effects of a droplet size, electrolyte concentration of an aqueous droplet on the amount of charge have been examined.

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