A simple feedback algorithm to predict the contact angle with contact angle hysteresis[1] JUN KWON PARK, KWAN HYOUNG KANG, Department of Mechanical Engineering, Pohang University of Science and Technology (POSTECH), San 31, Hyoja-dong, Pohang 790-784, South Korea — In numerical analysis of contact-line problems, contact angle model plays an important role in predicting the motion of contact line. We developed a simple feedback algorithm to numerically predict the contact angle with considering the contact angle hysteresis. This algorithm automatically find equilibrium contact angle which is between advancing and receding contact angle and the pinning position of contact line. We applied the numerical method to analyze the impacting droplet on a dry surface incorporating contact angle hysteresis and dynamic contact angle model. The numerical results showed good agreement with experimental data for the overall dynamics of the droplet, and the pinning process of contact line was also predicted well.

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