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A STUDY OF THE CONTACT ANGLE IN THE SPHERICAL AND CYLINDRICAL SURFACES

Abstract

The contact angle has been applied in many aspects, such as in Mining flotation, Oil exploitation, Textile printing and dyeing, Pesticide processing, Paint formula and so on. And, as one of the most important parameters in microgravity, the study to the contact angle is very necessary. C. W. Extrand has explored the influence of curved surfaces on contact angles using the experimental and theoretical methods, but he only studied the outside of the spherical surface. In this paper, we put forward an assume that the contact angle is just as a boundary condition, and has nothing to do with the shape of the surface and the volume of the liquid in microgravity. And we studied the influence of the inner spherical surface and the inner cylindrical surface to the contact angle, and finally compared with the contact angle in the flat surface.