عنوان مقاله:

D pore network model of the isothermal drying: A study on the effect of pore structure distribution-2

محل انتشار:

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خلاصه مقاله:

Drying is an immiscible displacement process which has a great importance in chemical industries. A two dimentional pore network model is considered to study isothermal drying behavior of capillary porous media saturated with water. The main displacement mechanism is capillary pumping based on invasion percolation concepts while viscous and gravitational effects are neglected. Three different mono- modal, regular bi-modal and irregular bi-modal pore network structures are considered. The effects of pore structures and air velocities on drying kinetic paramerters such as water saturation in the network, drying rate are studied and the effect of saturation on the development of the number of clusters are shown. The results indicate significant differences in drying of the three considered structures . Regular bimodal pore structure has a higher drying rate and is more favourable for a long constant drying period due to good spatial distribution

کلمات کلیدی:

capillary porous media, drying rate, pore structure, invasion percolation