

Effect of Ultrasonic waves for Copper Leaching from Chalcopyrite

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This paper was studied on the leaching kinetics of recovering copper in ferric chloride oxidant with hydrochloric acid from the chalcopyrite(CuFeS₂). CuFeS₂ included in the chalcopyrite ore was converted into cupric chloride(CuCl₂) to the scale of 90%. As the result of leaching experiment, the leaching mechanism was determined as different models based on the shrinking core model with spherical particles according to input of ultrasonic waves or not. In case of input of ultrasonic waves, the rate determining step was determined by chemical reaction. On the other hand, in the case of no input of ultrasonic waves, the step was determined by ash layer diffusion.