

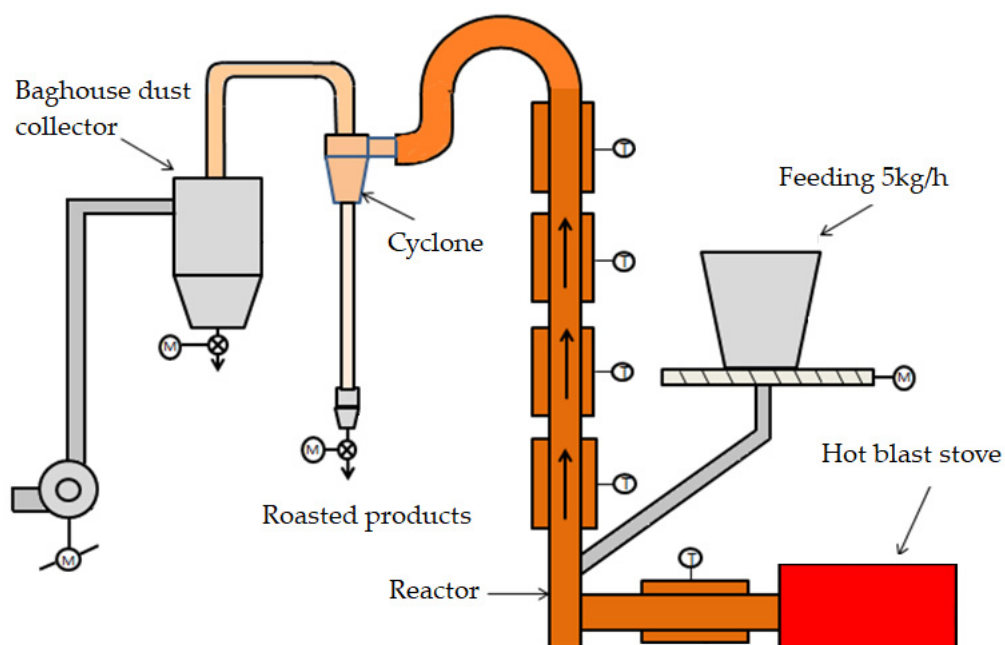
# Recovering Iron Concentrate from Low-Grade Siderite Tailings Based on the Process Mineralogy Characteristics

He Wan <sup>1,2,\*</sup>, Peng Yi <sup>1</sup>, Saija Luukkanen <sup>2</sup>, Juanping Qu <sup>1</sup>, Chonghui Zhang <sup>1</sup>, Shenghong Yang <sup>2</sup>  
and Xianzhong Bu <sup>1,\*</sup>

<sup>1</sup> School of Resources Engineering, Xi'an University of Architecture and Technology, Xi'an 710055, China; yipeng@xauat.edu.cn (P.Y.); qjp@live.xauat.edu.cn (J.Q.); zhangchonghui@xauat.edu.cn (C.Z.)

<sup>2</sup> Oulu Mining School, University of Oulu, 90570 Oulu, Finland; saija.luukkanen@oulu.fi (S.L.); shenghong.yang@oulu.fi (S.Y.)

\* Correspondence: wanhe@xauat.edu.cn (H.W.); buxianzhong@xauat.edu.cn (X.B.); Tel.: +86-029-8220-3408 (H.W. and X.B.)



**Figure S1.** Schematic diagram of the flash suspension reactor. First, milled tailing was added to the bottom of the reactor by a feeder with 5kg/h. Second, the powders were drawn up to react by the hot air in the reactor. Third, the reacted powders passed through the cyclone for gas-solid separation. Finally, the roasted products were passed into the barrel, which was cooled in the absence of outside air.