

Preparation of nitrogen-doped porous carbon structure using waste-plastic as a CO₂ absorbent material

김별두리, 박정아, 정진주, 김재훈, 이정수[†]
조선대학교
(jslee15@chosun.ac.kr[†])

Recently, the serious environmental issues such as global warming and microplastic are caused by CO₂ and waste-plastic. Previous studies have developed various processes to resolve the above-mentioned issues. However, the problems of secondary generated pollution in normal process have not been severely considered. We showed a unique process to fabricate porous carbon structure derived from waste-plastic. The developed porous carbon structure demonstrated selectively CO₂ capture through nitrogen doping and pore structure formed by activation of two steps. It also provided a solution of secondary generated pollution by reducing CO₂ emission. In conclusion, porous carbon structure using waste-plastic can be applied to CO₂ capture for achieving net-zero and plastic recycling.