

B,P,N-doped carbon as an electrocatalyst for the oxygen reduction reaction

최창현, 박성현, 우정일*
한국과학기술원(KAIST)
(siwoo@kaist.ac.kr*)

N-doped carbon, as an alternative of Pt in PEMFC, has been extensively investigated due to its low price and high stability in acidic media. However, its low activity towards ORR should be promoted to adapt the materials in commercial PEMFC system. Various approaches to increase the performance of N-doped carbon has been investigated in our group, and it was revealed that dual- or ternary-doping of heteroatoms in carbon is one of the promising method to modify the ORR activity of the carbon-based materials. Additional doping in N-doped carbon alters the physical properties of the carbon and it affects the electrochemical properties including ORR activity and pathway.