

supporting information for " *Edge-rich and (N, S)-doped 3D porous graphene as efficient metal-free electrocatalyst for ORR* "

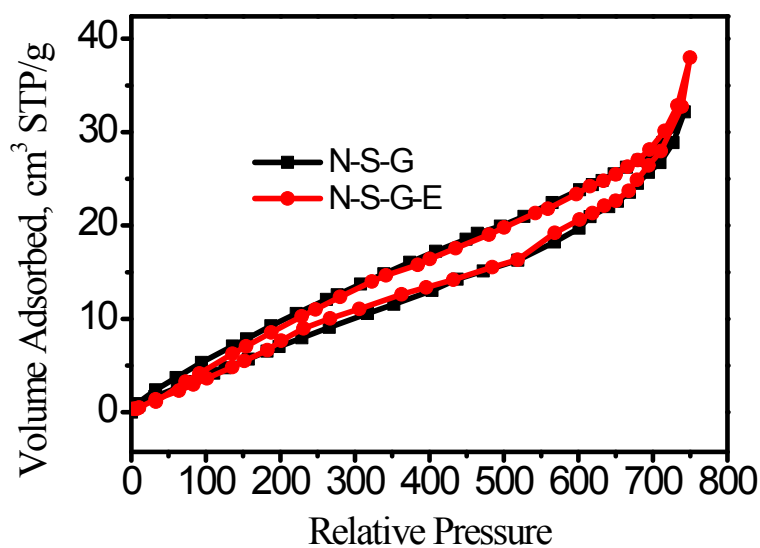


Fig. 1 Nitrogen adsorption curves for N-S-G and N-S-G-E

Table 1 the N1s species and content in N-S-G and N-S-G-E

Materials	total N (at.%)	N1s species			
		pyrdinic N (398.54 eV)	pyrrolic N (399.67 eV)	graphitic N (400.73 eV)	oxidized N (403.07 eV)
N-S-G	2.21%	5.58%	63.12%	23.51%	7.67%
N-S-G-E	4.50%	36.54%	15.26%	40.81%	7.39%