

Support Information for
Silicon carbide supported iron nanoparticles encapsulated in nitrogen-doped carbon for oxygen reduction reaction

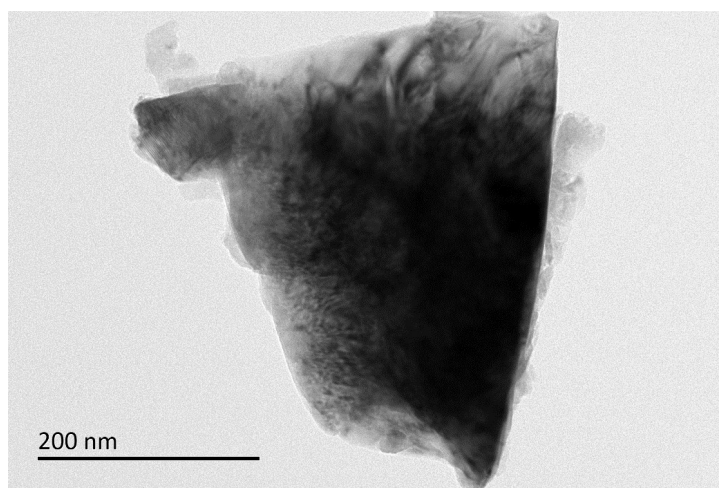
Jiayuan Li^{a,b}, Jing Wang^a, Dunfeng Gao^a, Xingyun Li^a, Shu Miao^c, Guoxiong Wang^{*a} and Xinhe Bao^{*a,c}

^aState Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, 457 Zhongshan Road, Dalian 116023, China.

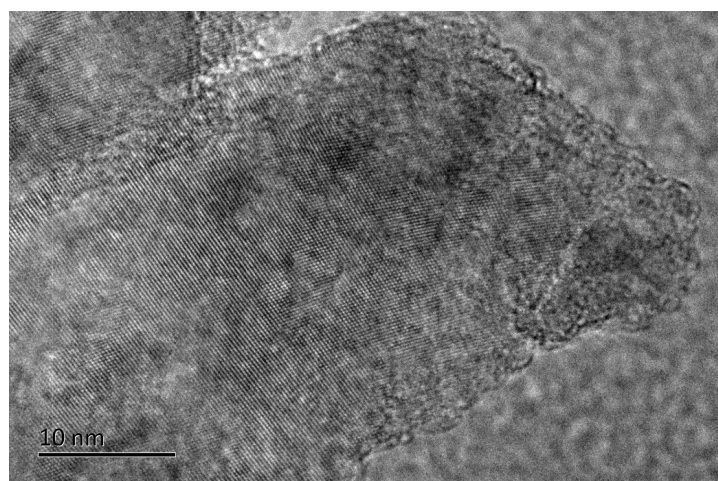
E-mail: wanggx@dicp.ac.cn (Guoxiong Wang). xhbao@dicp.ac.cn (Xinhe Bao).

^bUniversity of Chinese Academy of Sciences, Beijing, 100039, China.

^cDalian National Laboratory for Clean Energy, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, 116023, China.



(a)



(b)

Figure S1 (a) TEM and (b) HRTEM images of SiC.

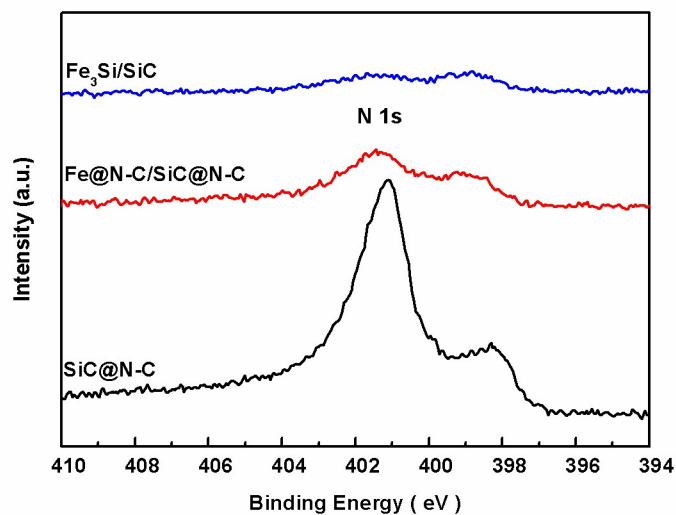


Figure S2 N1s XPS spectra of SiC@N-C, Fe@N-C/SiC@N-C and Fe₃Si/SiC.

Table S1 The ORR activities on the non-precious catalysts in alkaline medium. All the potential values from references were converted to vs. RHE for comparison.

Sample	Activity (vs. RHE)		Reference
	E _{onset}	E _{1/2}	
Fe@N-C/SiC@N-C	0.88 V	0.84 V	This work
Nitrogen-doped carbon nanosheets	0.97 V	0.85 V	11
Fe ₃ O ₄ in 3D nitrogen-doped graphene aerogel	0.78 V	---	12
Nitrogen-doped C/SiC	0.83 V	0.77 V	25
Fe/Fe ₃ C nanoparticles encapsulated in nitrogen-doped carbon	0.86 V	0.82 V	27
Fe ₃ C in graphitic layers	1.05 V	0.83 V	31
Nitrogen-doped graphene/carbon nanotube	0.87 V	0.69 V	32
Fe/Fe ₃ C-melamine/N-KB composite catalyst	0.88 V	0.80 V	33