Supporting Information

Microwave assisted synthesis of Boron and Nitrogen-co-doped reduced graphene oxide for the protection of electromagnetic radiation in Ku-band

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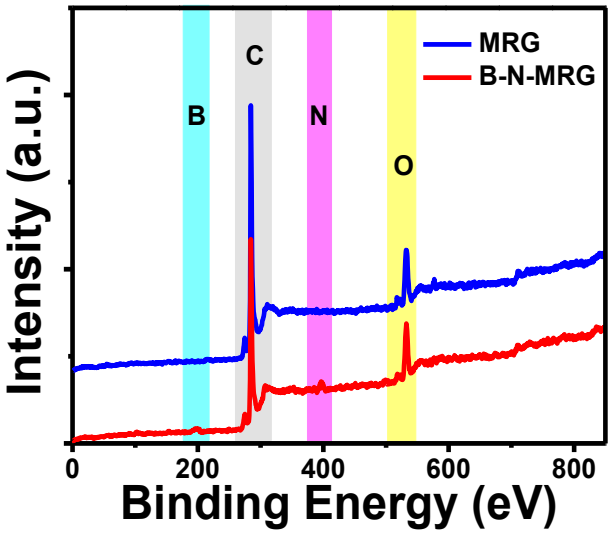

Figure S1. XPS survey of MRG and B-N-MRG.

Table S1. Values of Various Parameters of 2D-Variable Range Hopping Mechanism of all MRG samples.

Sample	T_0 (K)	α (cm^{-1})	R_h (hopping distance) (cm)		W_h (hopping energy) (eV)	
			T = 50 K	T = 20K	T = 50 K	T = 20K
MRG	3.93×10^{-6}	49.532×10^{3}	2.88×10^{-8}	3.91×10^{-8}	1.38×10^{-3}	5.53×10^{-4}
B-MRG	3.04×10^{-6}	43.539×10^{3}	3.01×10^{-8}	4.08×10^{-8}	1.16×10^{-3}	4.66×10^{-4}
N-MRG	1.20×10^{-6}	27.347×10^{3}	3.51×10^{-8}	4.77×10^{-8}	6.26×10^{-4}	2.51×10^{-4}
B-N-MRG	5.49×10^{-7}	18.520×10^{3}	4.00×10^{-8}	5.43×10^{-8}	3.73×10^{-4}	1.49×10^{-4}

Table S2. Various Parameters of ES-VRH model of all MRG samples.

Sample	T_{ES} (K)	α (cm^{-1})	R_h (cm)		W_h (eV)		E_{CG} (eV)
			T = 50 K	T = 20 K	T = 50 K	T = 20 K	
MRG	0.41	1.92×10^{7}	1.18×10^{-9}	1.86×10^{-9}	2.27	1.43	0.04
B-MRG	30.18	1.41×10^{9}	1.38×10^{-10}	2.17×10^{-10}	19.42	21.54	3.04
N-MRG	34.42	1.61×10^{9}	1.29×10^{-10}	2.04×10^{-10}	20.74	23.51	3.46
B-N-MRG	31.09	1.45×10^{7}	1.36×10^{-10}	2.14×10^{-10}	19.71	21.97	3.13