1	High yield and greener C-H difluoromethylation reactions using copp	ber
2	iodide nanoparticles/boron nitride nanosheets as versatile and recycla	ble
3	heterogeneous catalyst	
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13	XPS and FTIR Spectra as well as XRD Pattern	
14	Fig. S1. XPS spectra of (a) B 1s (b) N 1s (c) O 1s (d) C 1s; FT-IR spectra of	3
15	3 wt.% CuI/BNNSs (e); XRD patterns of recycled 3 wt.% CuI/BNNSs (f)	
16		
17	NMR Spectra	
18	¹ H and ¹³ C NMR spectra for 2-(difluoromethyl)benzothiazole.	4
19	¹⁹ F NMR spectra for 2-(difluoromethyl)benzothiazole.	5
20	¹ H and ¹³ C NMR spectra for 2-(difluoromethyl)benzothiazol-5-amine.	6
21	¹ H and ¹³ C NMR spectra for 5-bromo-2-(difluoromethyl)benzothiazole.	7

1	¹ H and ¹³ C NMR spectra for 2-(difluoromethyl)-5-nitrobenzothiazole.	8
2	¹ H and ¹³ C NMR spectra for 2-(difluoromethyl)-5-methylbenzoxazole.	9
3	¹ H and ¹³ C NMR spectra for (3,3-difluoroprop-1-yn-1-yl)benzene.	10
4	¹ H and ¹³ C NMR spectra for 4-(3,3-difluoroprop-1-yn-1-yl)aniline.	11
5	¹ H and ¹³ C NMR spectra for 1-(3,3-difluoroprop-1-yn-1-yl)-4-methylbenzene.	12
6	¹ H and ¹³ C NMR spectra for 1-bromo-4-(3,3-difluoroprop-1-yn-1-yl)benzene.	13
7	¹ H and ¹³ C NMR spectra for 1-(3,3-difluoroprop-1-yn-1-yl)-4-nitrobenzene.	14
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1 Comment on Fig. S1(e)

2 The molecular structure of 3 wt.% CuI/BNNSs was further confirmed by FT-IR. The peaks located 3 at wavenumber positions of ~1381 cm⁻¹ and 812 cm⁻¹ relate to in-plane stretching and out-of-plane 4 bending vibrational motions of B-N and B-N-B bonds, respectively. In addition, the peak located 5 at a wavenumber position of ~3400 cm⁻¹ relates to N-H or O-H stretching vibrational motions.¹







 $<^{109.14}_{109.20}$

































1 References

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