

Supported CuBr on graphene oxide/Fe₃O₄: a highly efficient, magnetically separable catalyst for the multi-gram scale synthesis of 1,2,3-triazoles

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(1) 2-((1-benzyl-1*H*-1,2,3-triazol-4-yl)methoxy)benzoate

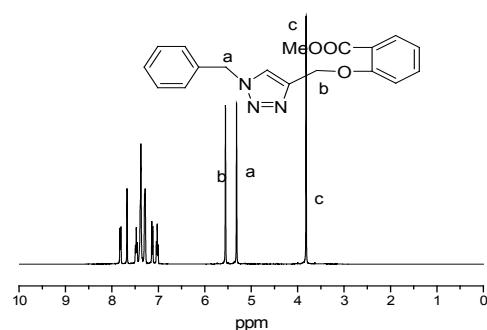


Fig. S1 ¹H NMR spectrum of methyl 2-((1-benzyl-1*H*-1,2,3-triazol-4-yl)methoxy)benzoate

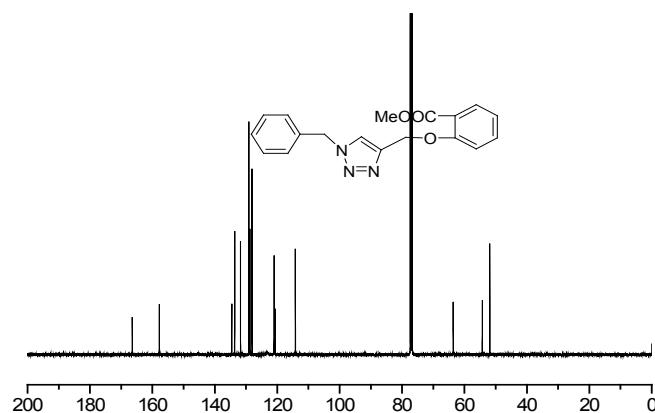


Fig. S2 ¹³C NMR spectrum of methyl 2-((1-benzyl-1*H*-1,2,3-triazol-4-yl)methoxy)benzoate

(2) 4-((2-isopropyl-5-methylphenoxy)methyl)-1-benzyl-1*H*-1,2,3-triazole

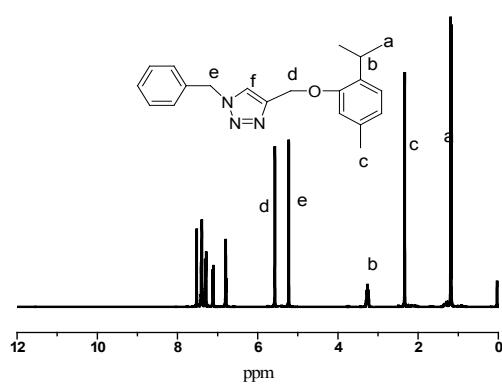


Fig. S3 ¹H NMR spectrum of 4-((2-isopropyl-5-methylphenoxy)methyl)-1-benzyl-1*H*-1,2,3-

triazole

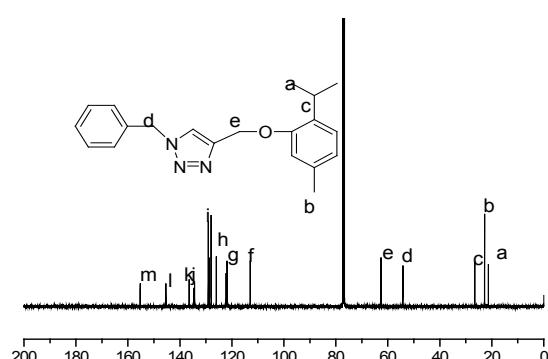


Fig. S4 ^{13}C NMR spectrum of 4-((2-isopropyl-5-methylphenoxy)methyl)-1-benzyl- 1H -1,2,3-triazole

(3) 4-((4-((1-benzyl- 1H -1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)-1-benzyl- 1H -1,2,3-triazole

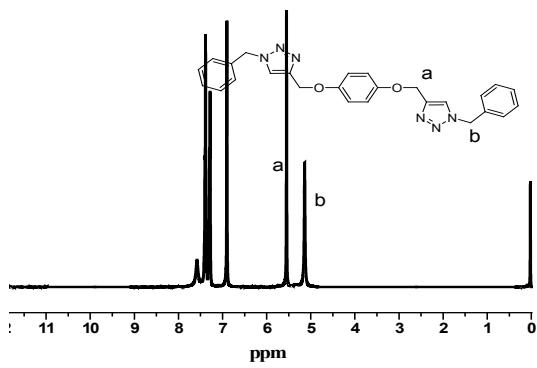


Fig. S5 ^1H NMR spectrum of 4-((4-((1-benzyl- 1H -1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)-1-benzyl- 1H -1,2,3-triazole

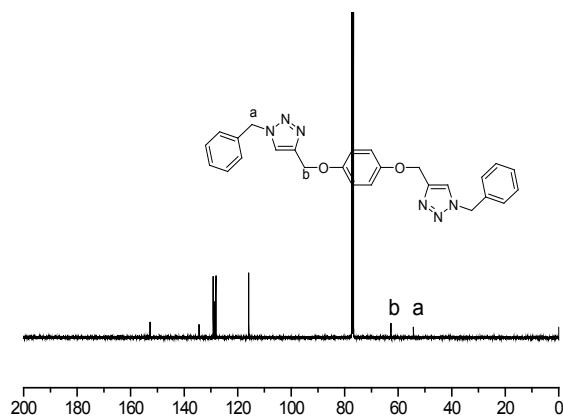


Fig. S6 ^{13}C NMR spectrum of 4-((4-((1-benzyl- 1H -1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)-1-benzyl- 1H -1,2,3-triazole

(4)

4-((4-((1-butyl- 1H -1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)-1-butyl- 1H -1,2,3-

triazole

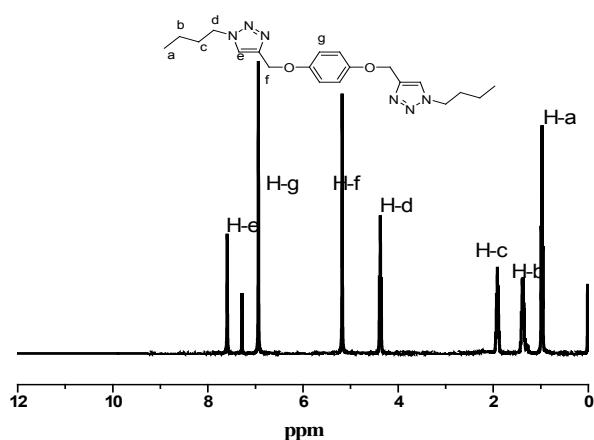


Fig. S7 ^1H NMR spectrum of 4-((4-((1-butyl- ^1H -1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)-1-butyl- ^1H -1,2,3-triazole

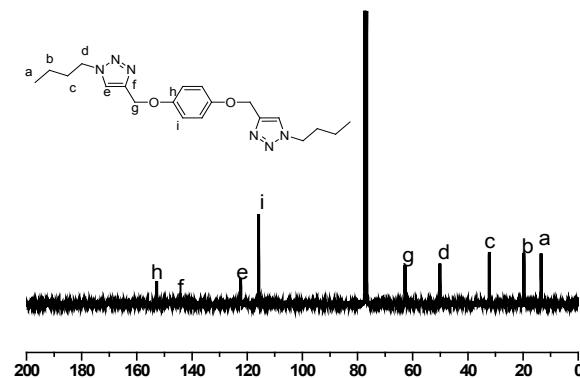


Fig. S8 ^{13}C NMR spectrum of 4-((4-((1-butyl- ^1H -1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)-1-butyl- ^1H -1,2,3-triazole

(5) 4-((3-((1-benzyl- ^1H -1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)-1-benzyl- ^1H -1,2,3-triazole

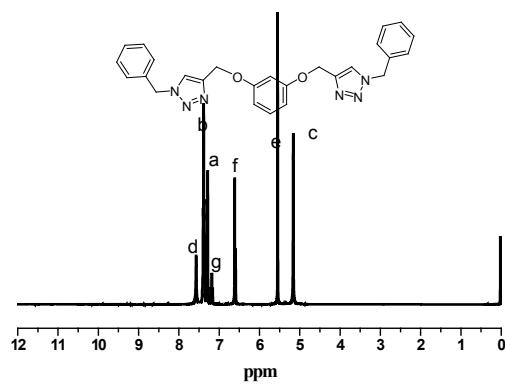


Fig. S9 ^1H NMR spectrum of 4-((3-((1-benzyl- ^1H -1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)

-1-benzyl-1*H*-1,2,3-triazole

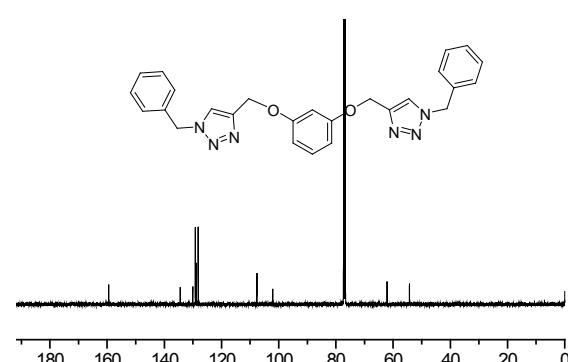


Fig. S10 ¹³C NMR spectrum of 4-((3-((1-benzyl-1*H*-1,2,3-triazol-4-yl)methoxy)phenoxy)methyl)-1-benzyl-1*H*-1,2,3-triazole

(6) Methyl 3,5-bis((1-benzyl-1*H*-1,2,3-triazol-4-yl) methoxy) benzoate

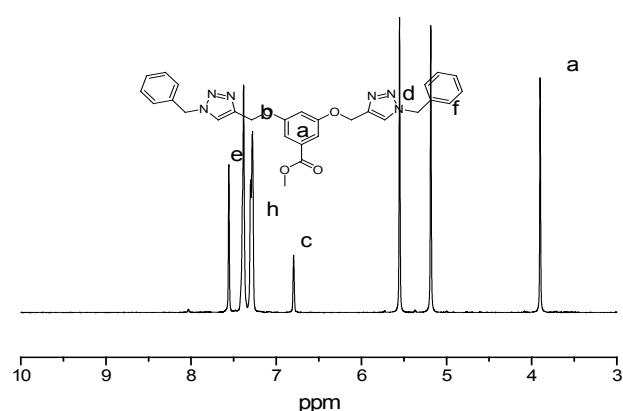


Fig. S11 ¹H NMR spectrum of Methyl 3,5-bis((1-benzyl-1*H*-1,2,3-triazol-4-yl) methoxy) benzoate

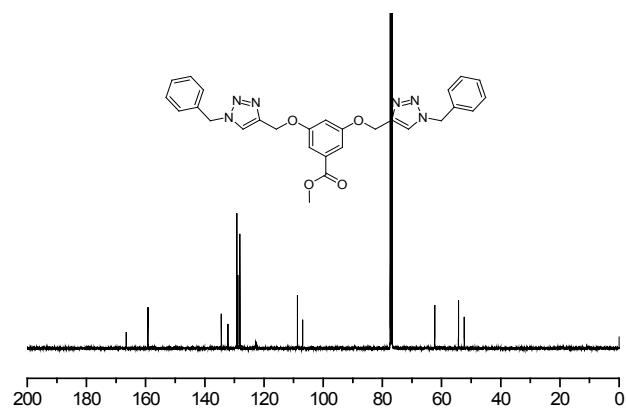


Fig. S12 ¹³C NMR spectrum of Methyl 3,5-bis((1-benzyl-1*H*-1,2,3-triazol-4-yl) methoxy) benzoate

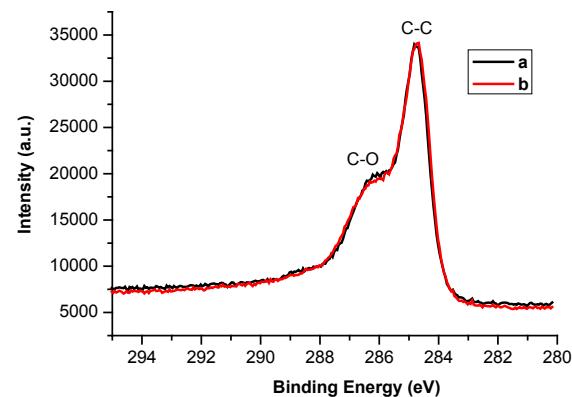


Fig. S13 XPS C1s spectra of GO/Fe₃O₄-CuBr (a) and GO/Fe₃O₄-CuBr after 6 recycling (b)

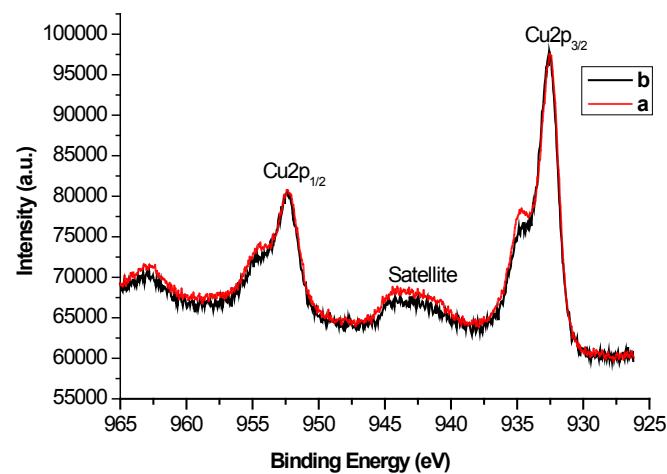


Fig. S14 XPS Cu2p spectrum of GO/Fe₃O₄-CuBr (a) and GO/Fe₃O₄-CuBr after 6 recycling (b)

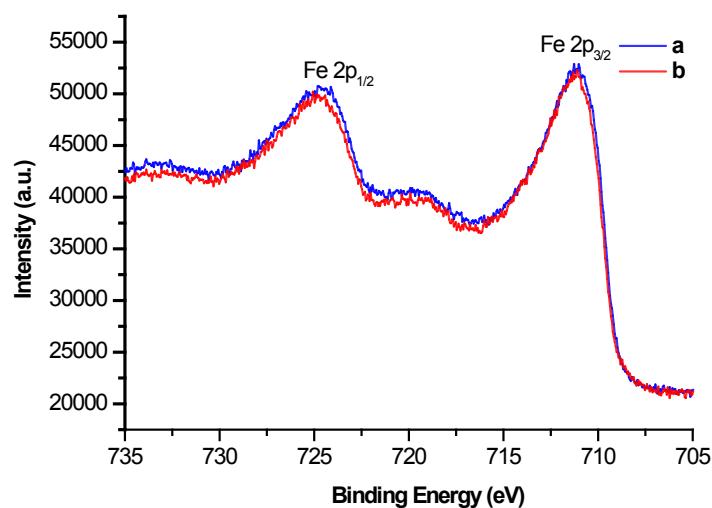


Fig. S15 XPS Fe2p spectrum of GO/Fe₃O₄-CuBr (a) and GO/Fe₃O₄-CuBr after 6 recycling (b)