

Table S1

XRD crystallographic data of GO and the mycogenic TiO₂-CuO@GO

Peak position (°2Th.)	Height [cts]	FWHM [°2Th.]	d-spacing [Å]	Area [cts*°2Th.]	Relative intensity [%]	Crystallite size (nm)
GO						
10.968	1046.84	0.7488	8.06022	1045.16	100	10.65
TiO₂-CuO@GO bionanocomposite						
8.2111	74.45	0.2047	10.76817	15.03	2.18	38.89411698
25.3916	64.32	0.3582	3.50785	22.73	3.29	22.72534345
27.4638	1610.1	0.4349	3.24771	690.79	100	18.79709375
35.551	146.11	0.4093	2.52528	59	8.54	20.37457534
36.1175	720.06	0.4093	2.48696	290.76	42.09	20.40716788
38.7178	174.2	0.3582	2.32571	61.55	8.91	23.49830162
41.2761	413.53	0.3326	2.18728	135.67	19.64	25.51341909
44.045	141.46	0.4093	2.05599	57.12	8.27	20.92893851
54.2732	1024.53	0.4349	1.69023	439.56	63.63	20.51845682
56.7069	326.58	0.3582	1.62334	115.39	16.7	25.19187441
57.2717	20.62	0.2047	1.60866	4.16	0.6	44.20080634
62.6677	126.69	0.3582	1.4825	44.76	6.48	25.95525171
64.0889	144.48	0.4093	1.45302	58.34	8.45	22.88939694
68.1891	40.3	0.4093	1.3753	16.27	2.36	23.42902253
68.9333	291.2	0.307	1.36226	88.19	12.77	31.37474058
69.8206	181.1	0.3582	1.3471	63.99	9.26	27.03463269
76.5987	37.25	0.4992	1.24288	24.79	3.59	20.27036071

Table S2

EDX elemental composition of GO and the mycogenic TiO₂-CuO@GO

Elements	Weight (%)	Atomic (%)
GO		
C K	67.66	73.59
O K	32.34	26.41
TiO₂-CuO@GO bionanocomposite		
Ti K	22.95	11.09
Cu K	27.64	10.06
O K	33.99	49.15
C K	15.42	29.70

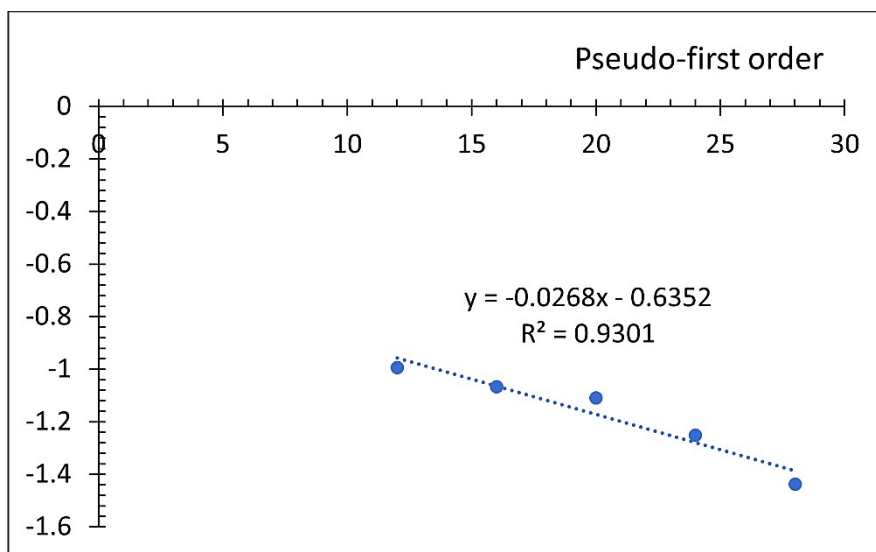


Fig. S1. Pseudo-first order curve for the catalytic degradation of CR using 0.1 g/L $\text{TiO}_2\text{-CuO@GO}$ nano catalyst, 0.8 g/L PMS, and 20 mg/L CR.