

Supporting Information

BaBiO₃ doping Bi (x = 0, 5, 10, 15, and 20%) perovskite oxides by Sol-gel method: Comprehensive biological assessment and RhB photodegradation

Wissam BOUCHA¹, Faïçal DJANI^{1*}, Djamel Eddine MAZOUZI¹, Rima Nour Elhouda TIRI^{2,3}, Soufiane MAKHLOUFI¹, Chaker LAIADI⁴, Arturo MARTÍNEZ-ARIAS⁵, Aysenur AYGUN^{2,3}, Fatih SEN^{2,3*}

¹Molecular Chemistry and Environment Laboratory, Mohammed KHIDER University Biskra, BP:145 RP, Biskra, 07000, Algeria.

²Sen Research Group, Department of Biochemistry, University of Dumlupınar, 43000, Kütahya, Türkiye.

³SRG Incorporated Company, Kutahya Design & Technopole, Calca OSB Neighbourhood, 43100 Kutahya, Türkiye.

⁴Department of Chemical Engineering, Mohammed KHIDER University - Biskra 07000, Algeria.

⁵Instituto de Catálisis y Petroleoquímica, CSIC, C/Marie Curie 2, Campus de Cantoblanco, 28049 Madrid, Spain.

*Corresponding author: f.djani@univ-biskra.dz; fatihsen1980@gmail.com.

Table S1. Structural parameters of BaBiO₃ - BaCO₃ (0%. 5%. 10%. 15 %. 20% excess Bi) nanoparticles.

	oxide	Cristal system	Lattice Parameters					Cell volume(Å ³)	Crystallite size (Å)
			a (Å)	b (Å)	c (Å)	α=β (°)	γ (°)		
Pure BBO	BaBiO ₃	Monoclinic	10.6322	6.1357	6.1853	90	125.380	328.9852	515.5
	BaCO ₃	Orthorhombic	5.314	8.904	6.43	90	90	304.241	545
5 % excess Bi	BaBiO ₃	Monoclinic	10.6310	6.1358	6.1854	90	125.401	328.8833	639
	BaCO ₃	Orthorhombic	5.314	8.904	6.43	90	90	304.241	545
10 % excess Bi	BaBiO ₃	Monoclinic	10.6151	6.1344	6.1818	90	125.345	328.3523	639
	BaCO ₃	Orthorhombic	5.314	8.904	6.43	90	90	304.241	712
15 % excess Bi	BaBiO ₃	Monoclinic	10.6227	6.1325	6.1809	90	125.376	328.3142	489.5
	BaCO ₃	Orthorhombic	5.314	8.904	6.43	90	90	304.241	712
20 % excess Bi	BaBiO ₃	Monoclinic	10.6107	6.1262	6.1731	90	125.4127	327.0472	548
	BaCO ₃	Orthorhombic	5.314	8.904	6.43	90	90	304.241	562