

Article

Bi₂WO₆/C-Dots/TiO₂: A Novel Z-Scheme Photocatalyst for the Degradation of Fluoroquinolone Levofloxacin from Aqueous Medium

Shelja Sharma ¹, Alex O. Ibhaddon ², M. Grazia Francesconi ³, Surinder Kumar Mehta ⁴, Sasikumar Elumalai ¹, Sushil Kumar Kansal ^{5,*}, Ahmad Umar ^{6,*} and S. Baskoutas ⁷

¹ Chemical Engineering Division, Centre of Innovative and Applied Bioprocessing, Mohali-140306, India; sshhelja@yahoo.in (S.S.); sasikumar@ciab.res.in (S.E.)

² Department of Chemical Engineering, The University of Hull, Hull HU6 7RX, United Kingdom; a.o.ibhaddon@hull.ac.uk

³ Department of Chemistry, University of Hull, Hull HU6 7RX, United Kingdom; m.g.francesconi@hull.ac.uk

⁴ Department of Chemistry and Centre of Advanced Studies, Panjab University, Chandigarh 160014, India; skmehta@pu.ac.in

⁵ Dr. S.S. Bhatnagar University Institute of Chemical Engineering and Technology, Panjab University, Chandigarh 160014, India

⁶ Department of Chemistry, Faculty of Science and Arts, Promising Centre for Sensors and Electronic Devices (PCSED), Najran University, Najran-11001, Kingdom of Saudi Arabia

⁷ Department of Materials Science, University of Patras, Patras-26504, Rio Achaia, Greece; bask@upatras.gr

* Correspondence: sushilkk1@pu.ac.in (S.K.K.); ahmadumar786@gmail.com (A.U.)

SUPPORTING INFORMATION

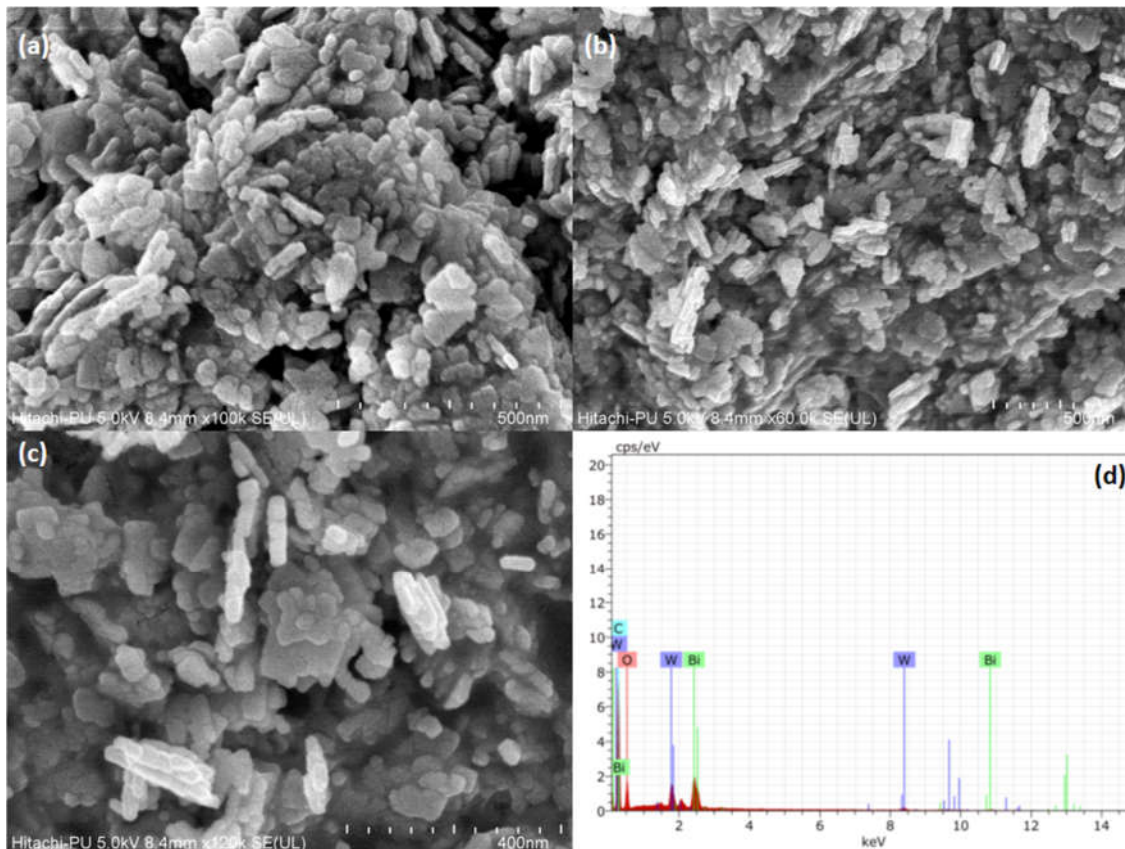
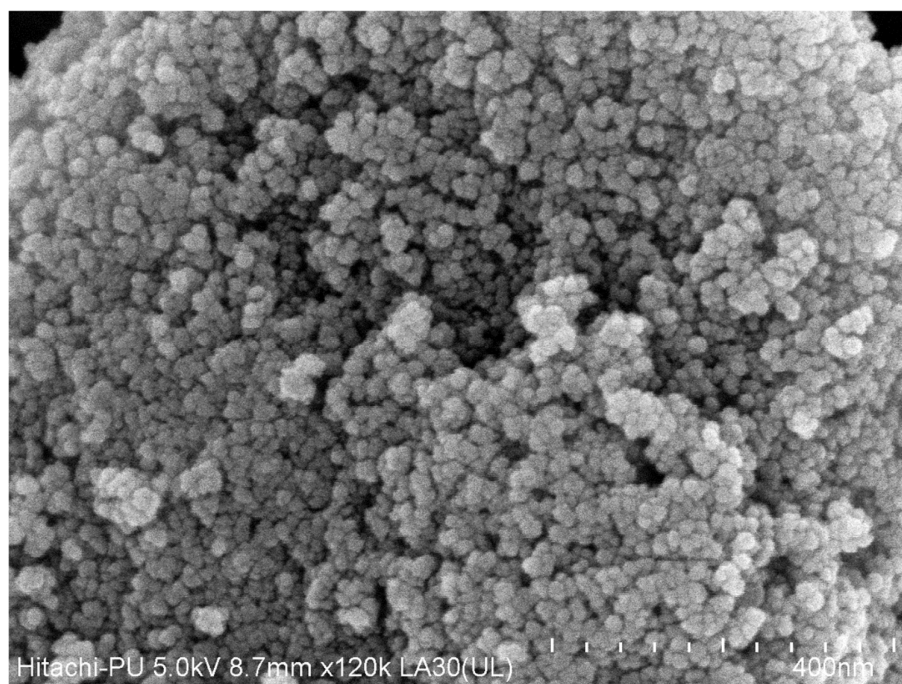
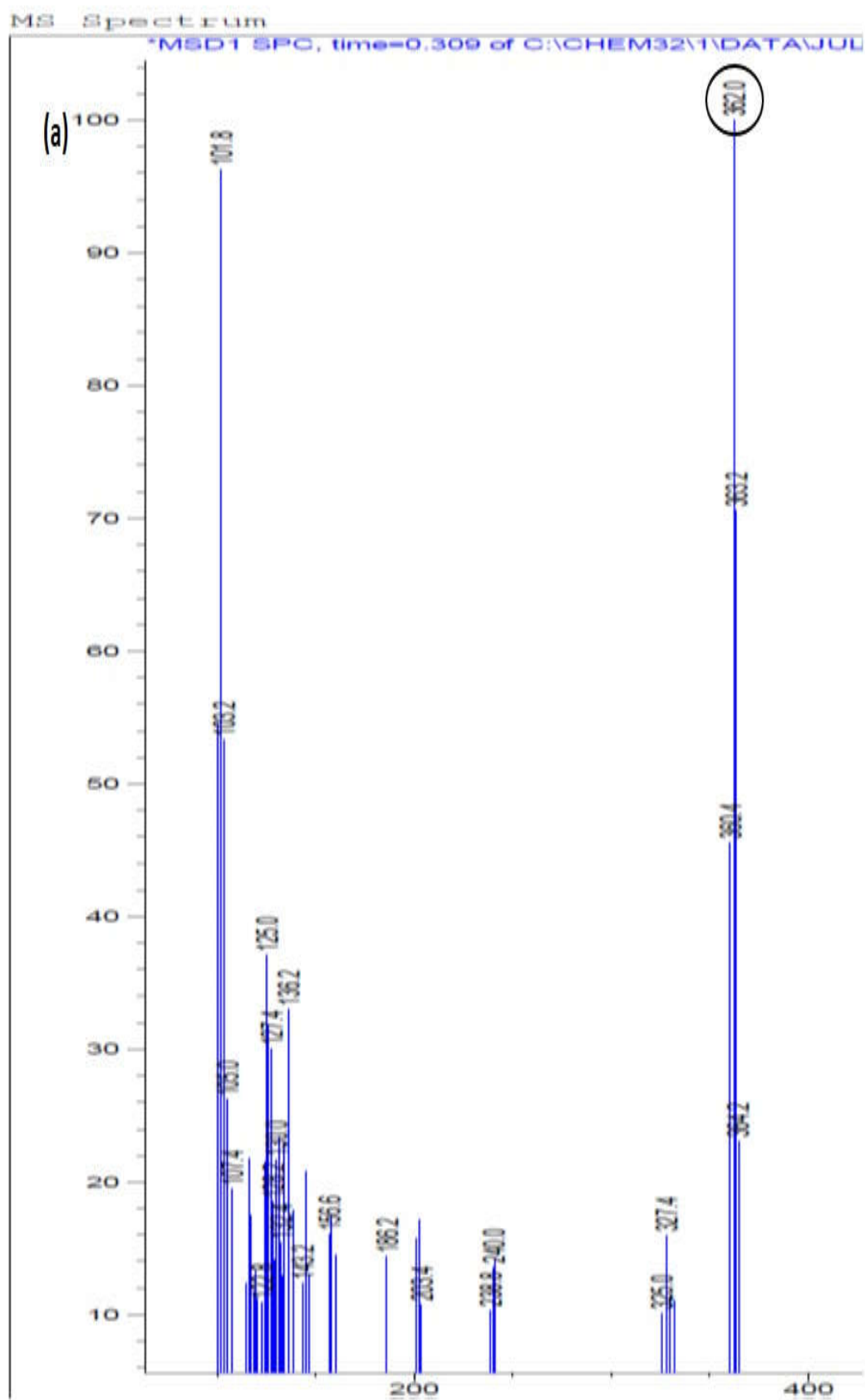
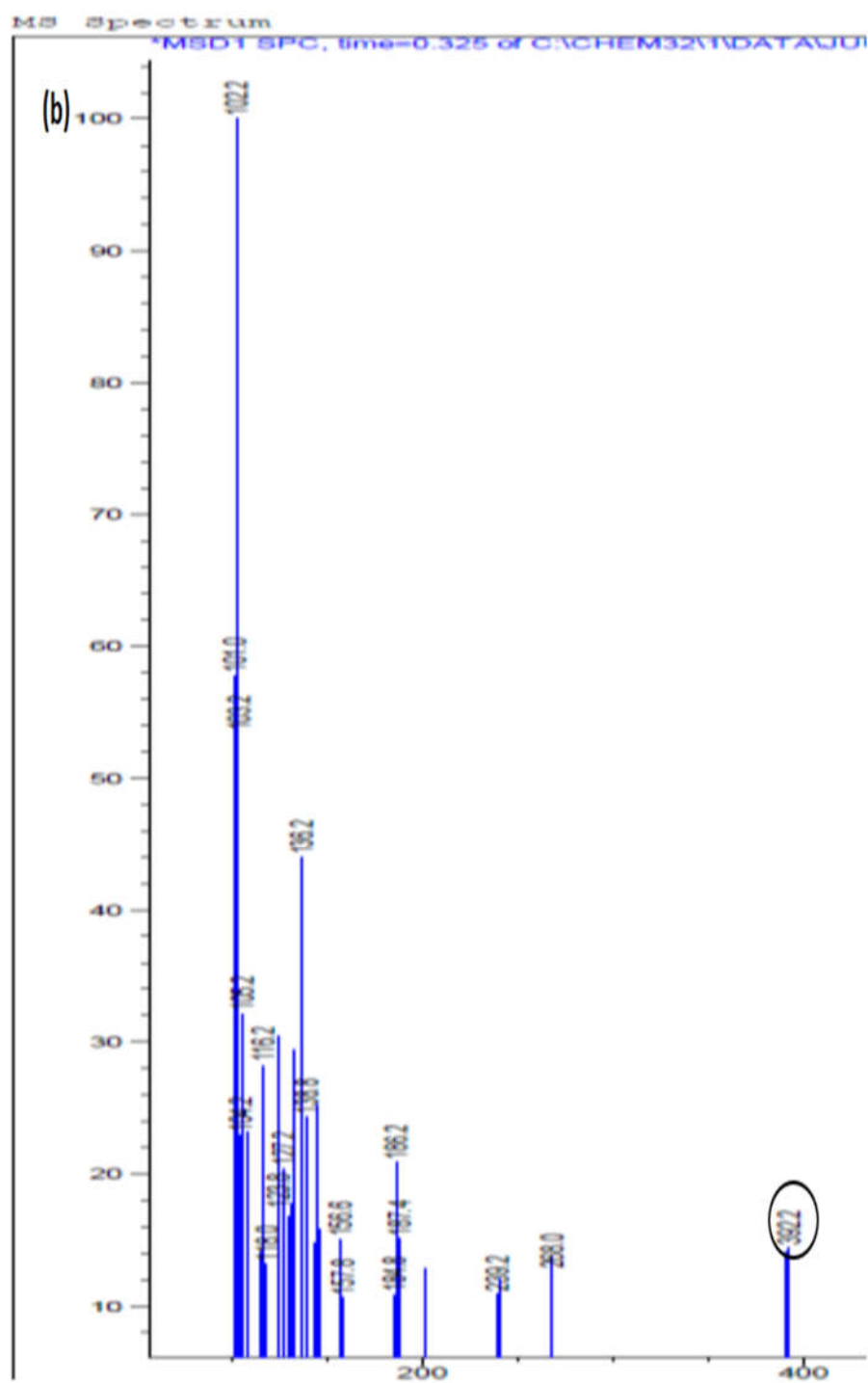
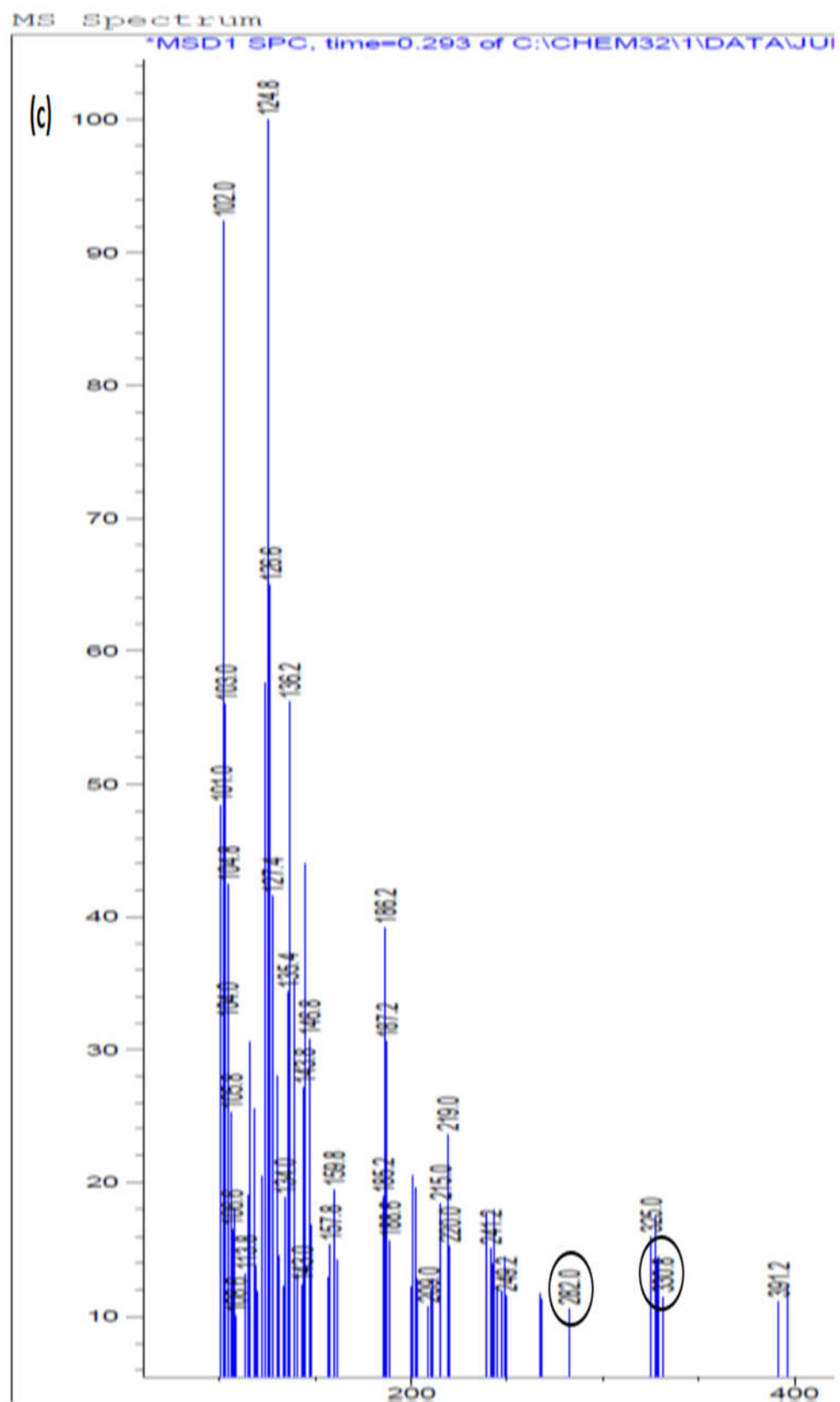


Figure S1. (a,b,c) FESEM images of Bi₂WO₆ at different magnifications. (d) EDS spectrum of Bi₂WO₆.**Figure S2.** FESEM image of TiO₂/C-dots.**Table S1.** Elemental composition of Bi₂WO₆.

Element	Series	unn. C [wt.%]	norm. C [wt.%]	Atom. C [wt.%]	Error (3 Sigma) [wt.%]
Oxygen	K-Series	14.21	12.75	17.69	6.67
Bismuth	M-Series	20.11	18.05	1.92	2.26
Tungsten	L-Series	30.60	27.47	3.32	4.25
Carbon	K-Series	46.48	41.72	77.08	17.70
Total		111.40	100.00	100.00	







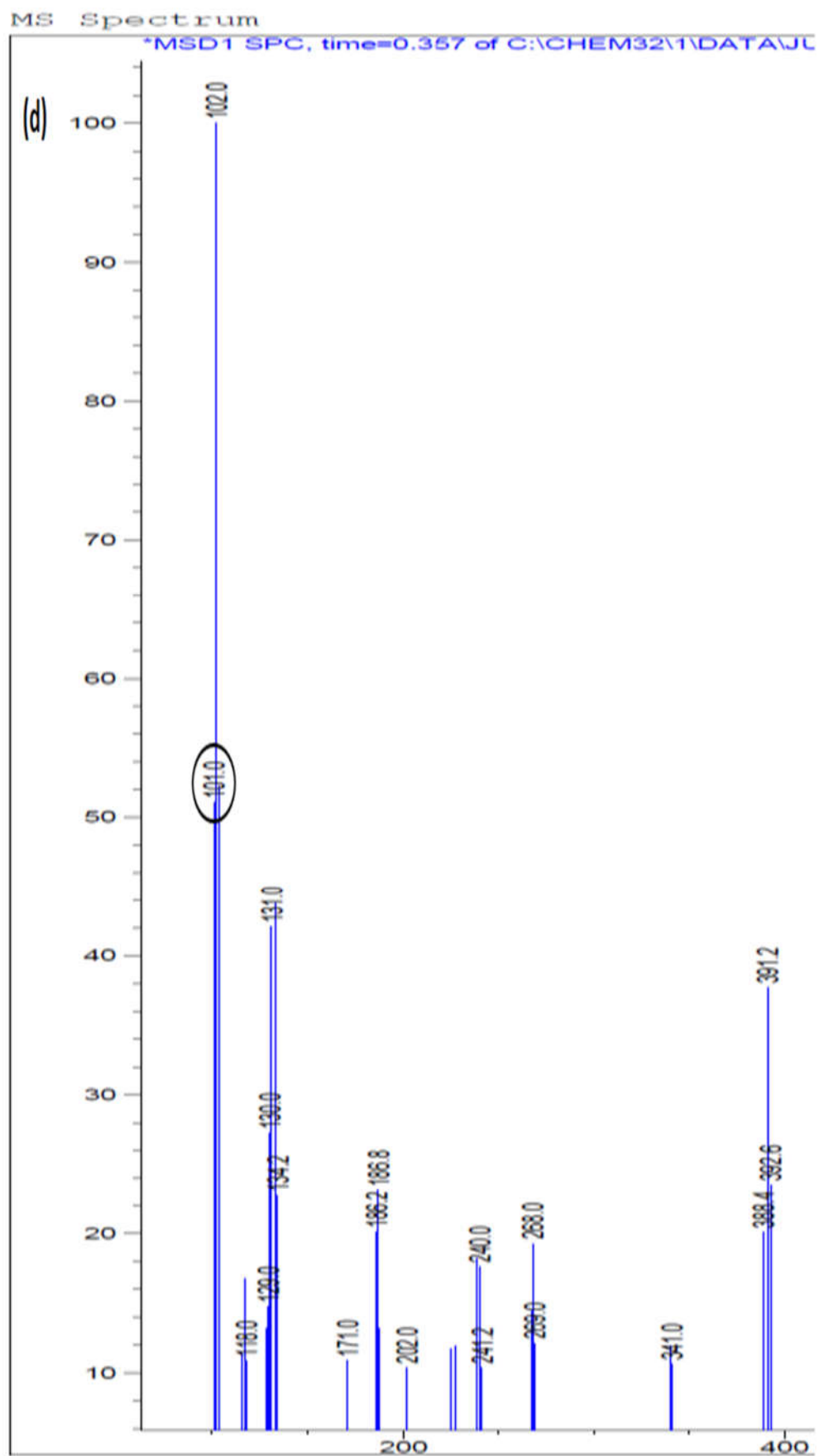


Figure S3. MS spectrum of $[M+H]^+$ ions of levofloxacin (a) parent compound; (b-d) its main products formed during the solar light induced photocatalytic degradation.