



Figure S1. Characterization of green-synthesized ZnO NPs using, Ultraviolet-Visible absorption spectra for ZnO NPs and buchu extract at (A) 400 – 4000 nm wavelength, (B) 300 – 500 nm wavelength range, (C) element composition of the ZnO NPs sample.

Table S1. Overall element distribution analyzed by SEM-EDX spectroscopy in sorghum shoots.

Element	Weight (%) 0 mM	400 mM	400 mM + 5 mg/L	400 mM + 10 Mg/L
C	58.01	53.32	62.41	54.04
O	37.78	38.37	28.2	32.82
Na	0.51	0.67	1.18	1.98
Mg	0.15	-	-	0.37
Al	-	1.59	0.61	-
Si	1	-	0.31	1.11
P	0.15	0.26	0.44	0.61
S	-	0.19	0.24	0.19
Cl	2.03	5.37	5.61	6.27
K	0.24	0.23	0.77	2.32
Ca	0.13	-	0.22	0.29
Total percentage (%)	100	100	100	100