

## **Abstract**

Nano-sized manganese oxide–bovine serum albumin was synthesized and characterized by scanning electron microscopy (SEM), atomic force microscopy (AFM), UV-vis, X-ray diffraction (XRD), infrared spectroscopy (FTIR), energy-dispersive X-ray spectroscopy (EDX), elemental mapping and transmission electron microscopy (TEM). The oxide shows water oxidizing activity in the presence of cerium(IV) ammonium nitrate as a nonoxo transfer oxidant. We used bovine serum albumin in the compound as a promising model for stabilizing proteins in photosystem II.