

اسم البحث : Biosynthesis and characterization of MgO nanowires using *Prosopis farcta* and evaluation of their applications

الرابط : <https://www.sciencedirect.com/science/article/abs/pii/S138770032031025X>

اسماء الباحثين : Ahmed Mishaal Mohammed, Osama H. Abdullah

الكلمات المفتاحية : Biosynthesis, MgONWs, Nanowires, *Prosopis Farcta* , *Staphylococcus aureus*  
الملخص :

Magnesium oxide nanowires (MgONWs) were prepared using leaves extract of *Prosopis farcta* (*P. farcta*). Transmission electron microscope, atomic force microscope, X-ray diffraction, and fourier transform infrared spectroscopy were used to study the properties of MgONWs. Anticancer activity of MgONWs against breast cancer cell lines, namely, Ahmed Murtatha Jabria-13 (AMJ-13) and human breast epithelial (HBL) cells were investigated, and their antimicrobial activity against gram-positive bacteria *staphylococcus aureus* (*S. aureus*) was estimated. Contrary to HBL cells, MgONWs showed important cytotoxicity against AMJ-13 cell line. While, antibacterial activity illustrated that *S. aureus* was influenced via MgONWs. The results proved that MgONWs could be used to treat cancer and bacteria.