Functionalized silica nanoparticles as adjuvant factor to increase the cytotoxicity of metallodrugs toward human tumor cells

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Electronic Supplementary Information – ESI

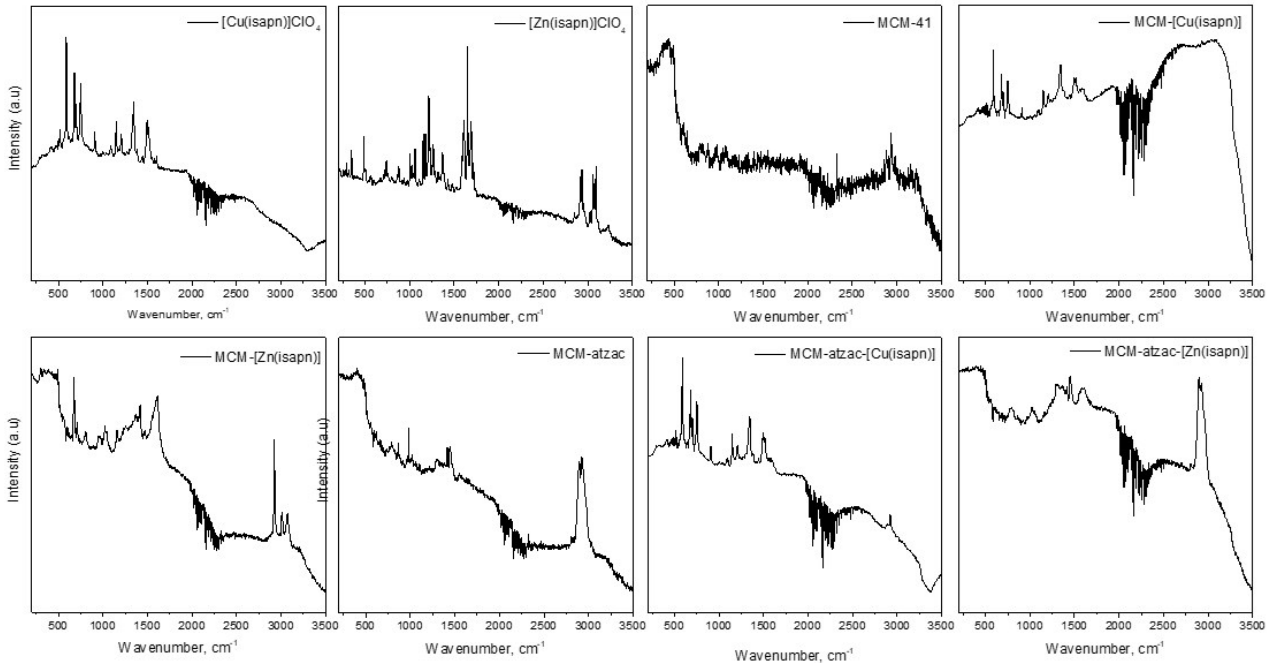

Figure S1: FT-Raman spectra without treatment of each prepared compound.

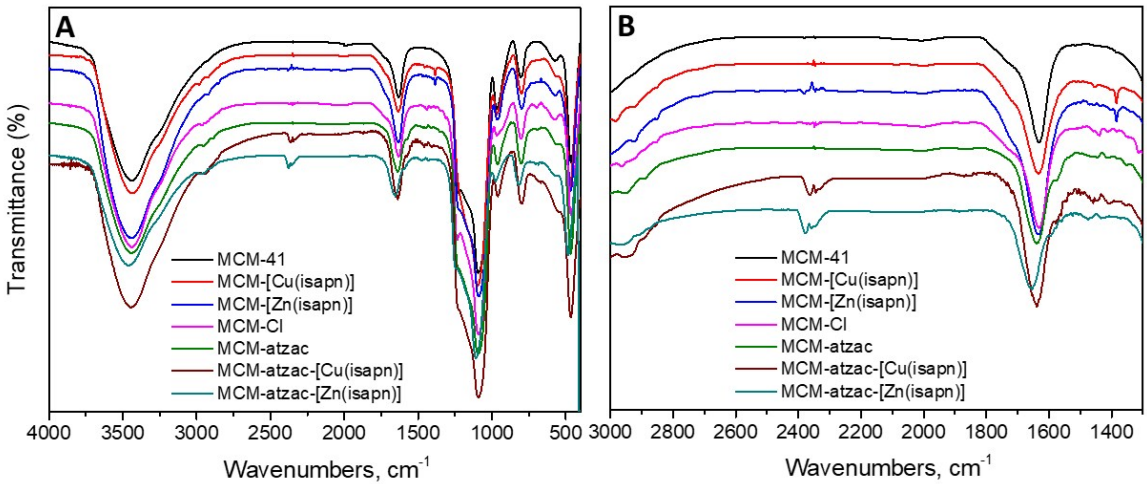

Figure S2: FT infrared spectra of the copper and zinc complexes immobilized into the pure and functionalized matrices. A – normal scale from 400 to 4000 cm^{-1} and B – expanded scale from 1500 to 3000 cm^{-1}.

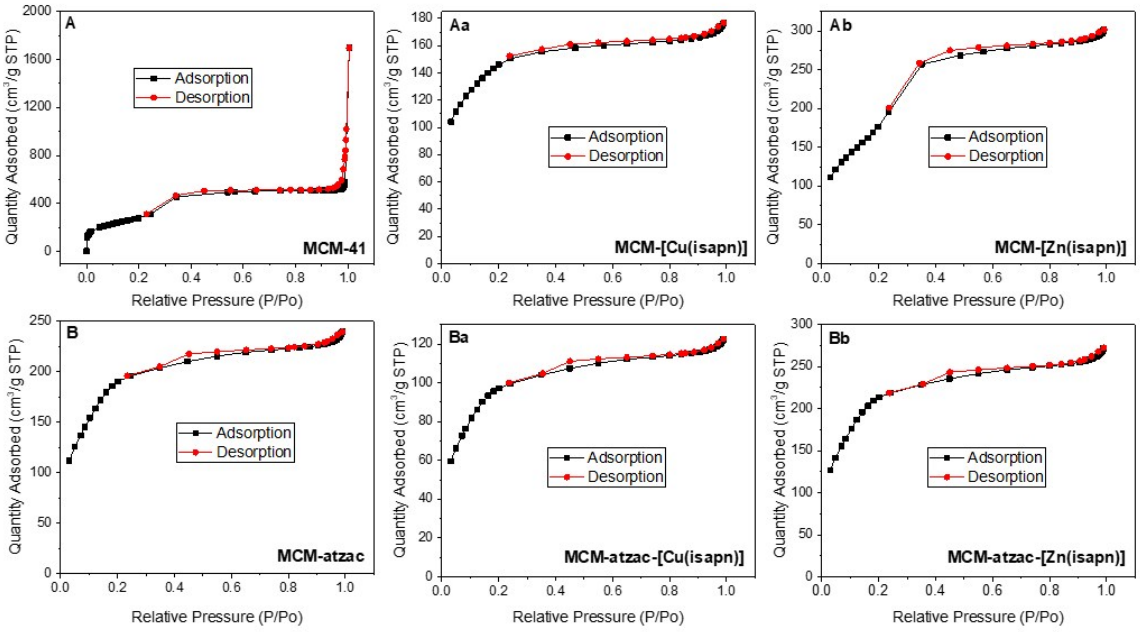

Figure S3: Nitrogen adsorption–desorption isotherms of MCM-41 (A), MCM-[Cu(isaspn)] (Aa), MCM-[Zn(isaspn)] (Ab), MCM-atzac (B), MCM-atzac-[Cu(isaspn)] (Ba)and MCM-atzac-[Zn(isaspn)] (Bb).

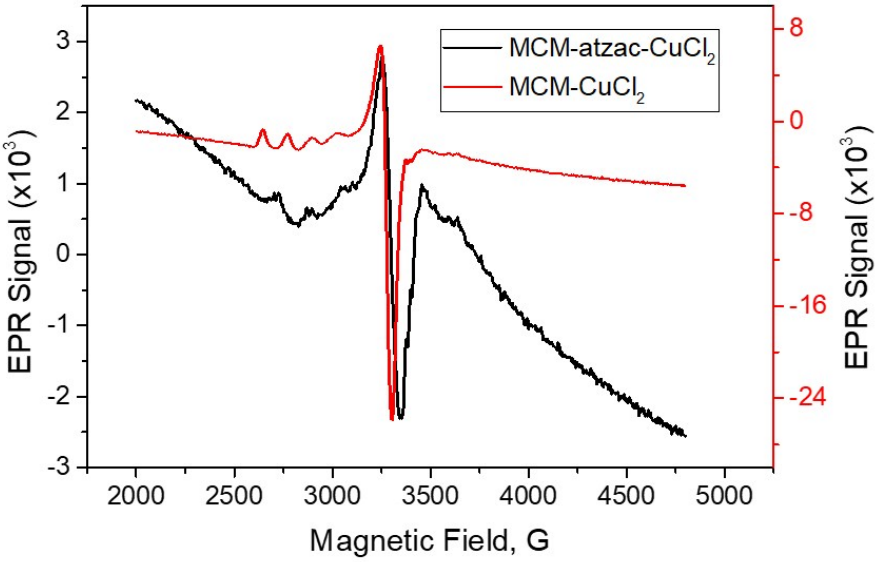

Figure S4: X-band EPR spectra of the $CuCl_2$ immobilized into the unmodified and modified matrix at 77K.

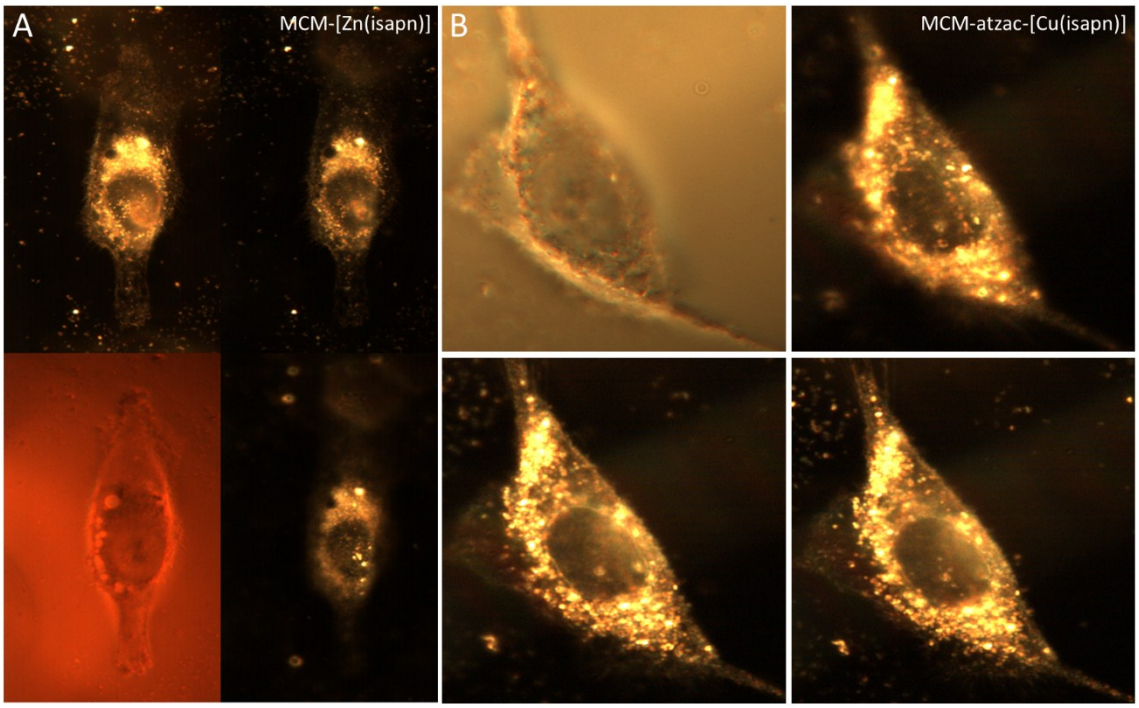

Figure S5: Optical image acquired with the Cytoviva™ instrument of SKMEM-147 cells incubated for 24h with MCM-[Zn(isapn)] and MCM-atzac-[Cu(isapn)] nanoparticles in different focal planes.

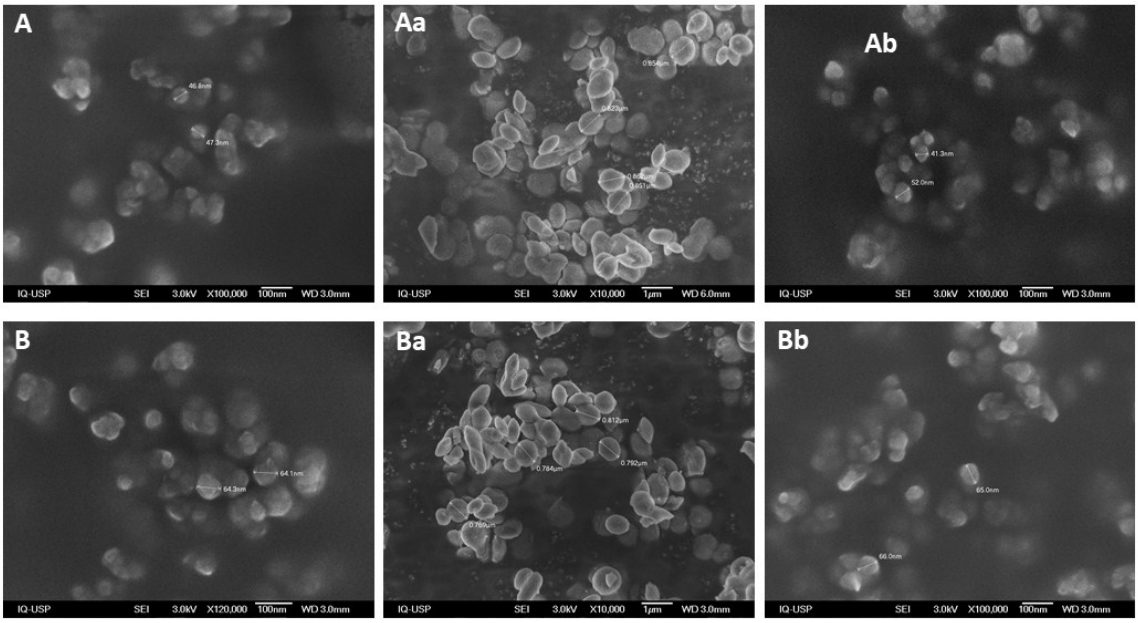

Figure S6: Scanning electron microscopy of MCM-41 (A), MCM-[Cu(isapn)] (Aa), MCM-[Zn(isapn)] (Ab), MCM-atzac (B), MCM-atzac-[Cu(isapn)] (Ba) and MCM-atzac-[Zn(isapn)] (Bb).

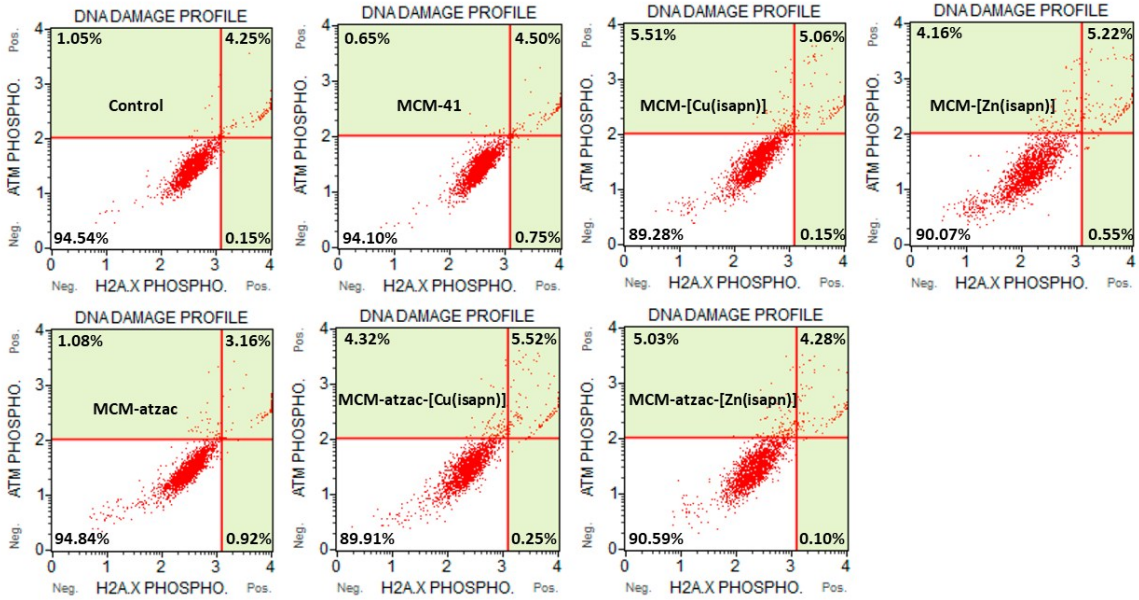

Figure S7: DNA damage response after treatment in melanoma cancer cells, SKMEL-147.