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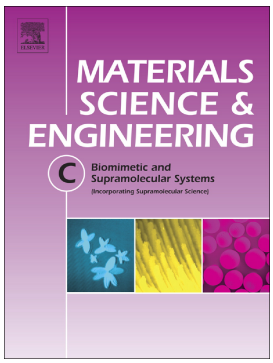

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Molecular Encapsulator–Appended Poly(Vinyl Alcohol) Shroud on Ferrite Nanoparticles. Augmented Cancer–Drug Loading and Anticancer Property

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Highlights

- Magnesium ferrite nanoparticles with high magnetization value are prepared.
- β-Cyclodextrin-tethered PVA polymer is prepared and coated on the nanoparticles
- High percentage of drug loading is attained using the nanocarrier.
- The anticancer activity of the drug loaded magnetic nanocarrier is studied on HCT-15 prostatic cancer cells.
- The ferrite-modified PVA hybrid nanoparticles function well as camptothecin carriers.

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Abstract Magnetic nanoparticles (MNPs) have the potency to deliver cancer drugs assisted by the application of a magnetic field. In this paper, we present the design of magneium ferrite nanoparticles of size suitable for drug delivery. A coating polymer, poly(vinyl alcohol), tethered