

عنوان مقاله:

Chemo-phototherapy of cancer cells using gold nanocage -cored pHsensitive thiol-ended triblock copolymer

محل انتشار:

بیستمین کنگره شیمی ایران (سال: 1397)

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خلاصه مقاله:

Light-based therapies including photothermal therapy have been validated clinically for curative and palliative treatment of solid tumors. However, these monotherapies can suffer from incomplete tumor killing [1-2]. According to these facts, gold nanocage-cored biodegradable micelles were prepared by coating gold nanocage (GNC) with synthesized pH -sensitive thiol-ended triblock copolymer [poly (acrylic acid) -b-poly (N,N dimethyl amino ethylmetacrylate) -b-poly (ϵ -caprolactone)-SH; PAA-b-PDMAEMA-b-PCL-SH]. Furthermore, the anti-cancer drug methotrexate (MTX) was conjugated onto the gold nanocage-cored micelles (GNC@ polymer) by the electrostatic force and the nanocomposites formed were named GNC@ polymer- MTX. The in vitro therapy effect was comprehensively evaluated among free MTX, GNC@polymer, and GNC@ polymer-MTX, with or without near- IR light irradiation to improve curative effect of GNC@ polymer-MTX led by the combination of chemo - photothermal therapy

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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