Ηράκλειο, 1 Νοεμβρίου 2021

<u>ΑΝΑΚΟΙΝΩΣΗ</u>

Η ΠΑΡΟΥΣΙΑΣΗ ΤΗΣ ΔΙΠΛΩΜΑΤΙΚΗΣ ΕΡΓΑΣΙΑΣ

Της φοιτήτριας **Ιωάννας Χατζάκη,** θα γίνει τη

<u>Πέμπτη 4/11/2021</u> και ώρα **14:00**

στην αίθουσα Α210 στο Κτήριο Μαθηματικού

Θέμα Διπλωματικής:

«*Photodegradable Hydrogels for Drug Delivery Applications*»

Η παρουσίαση θα γίνει και διαδικτυακά μέσω του συνδέσμου:
https://virtconf.materials.uoc.gr/b/sta-xhm-uy3-qbl
Για την παρακολούθηση της παρουσίασης δια ζώσης, το κοινό θα πρέπει να έχει τα απαραίτητα δικαιολογητικά (πιστοποιητικό εμβολιασμού, νόσησης ή rapid test).

Abstract:
Hydrogels are widely used in a variety of biomedical applications, including drug delivery, and tissue engineering. The aim of the present thesis, is the development of photodegradable hydrogels comprising linear poly(ethylene glycol) (PEG) chains with different molecular weights (1000 gr/mol, 1500 gr/mol and 4000 gr/mol), and a small, difunctional aromatic comonomer as the crosslinker. Dithiol end-functionalized PEGs with different molecular weights were synthesized and used as macromonomers. The resulting products were characterized by proton nuclear magnetic resonance (^{1}H NMR) spectroscopy. Hydrogels were prepared at a 1:1 and 2:1 molar ratio of the two components and were characterized in terms of their swelling degrees and their ability to encapsulate hydrophilic and hydrophobic dye molecules. The porous structure of the prepared hydrogels was characterized by scanning electron microscopy (SEM), which showed that the hydrogels prepared using the 4000 gr/mol PEG macromonomer appeared to be highly porous and with larger pores compared to the hydrogels prepared using the 1000 gr/mol and 1500 gr/mol PEG macromonomers. Moreover, the release profile of the hydrophilic and the hydrophobic dye from the hydrogels in aqueous environments, with and without UV light (254 nm) irradiation, was investigated.

710 03 Ηράκλειο, Κρήτη
Τηλ.: 2810-394462 Γραμματεία Φοιτητών
2810-394271 Γραμματεία Τμήματος

GR-710 03, Heraklion, Crete, GREECE
Tel: +30-2810-394462 Students' Secretariat
+30-2810-394271 Dept. Secretariat
Fax: +30-2810-394273   e-mail: secretariat@materials.uoc.gr