

CAPILLARY ELECTROPHORESIS & BIOPOLYMER APPLICATION LAB

DOÇ. DR. ZEYNEP KALAYCIOĞLU



👉 Seeking M.Sc. and Ph.D. students interested in the below research topics!

- ✓ The development of analytical methods with capillary electrophoresis
- ✓ Production of biopolymeric food packaging films incorporated with natural products
- ✓ Production of biopolymeric wound dressings
- ✓ Green synthesis of metal/metal oxide nanoparticles
- ✓ Removal of dyes from wastewater using polymeric/biopolymeric hydrogels
- ✓ Protein-drug/bioactive compound bindings and interactions

kalayciogluz@itu.edu.tr

Lab website:

<https://capillary-biopolymerlab.vercel.app/>

Room: B3-114

Lab: L-102

Ph.D., in Chemistry (2015-2020)
Istanbul Technical University

M.Sc., in Chemistry (2013-2015)
Istanbul Technical University

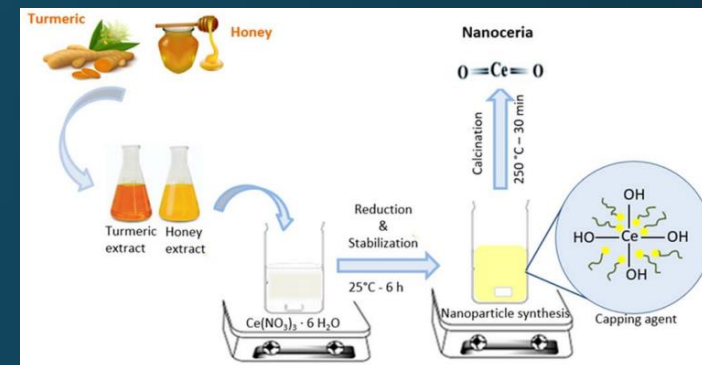
B.Sc., in Chemistry (2007-2013)
Yildiz Technical University

For more information for my scientific papers:

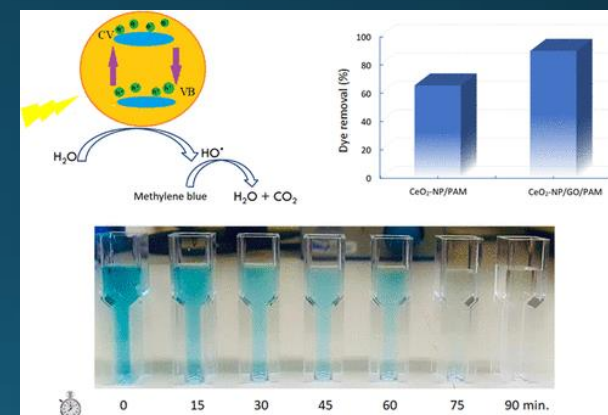
[Google Scholar](#)

[ORCID](#)

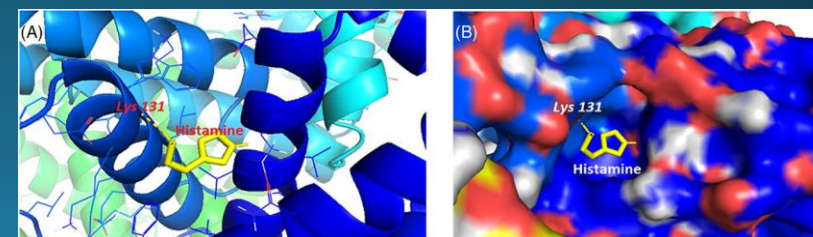
[Scopus](#)



<https://doi.org/10.1088/2043-6262/ac5dc5>

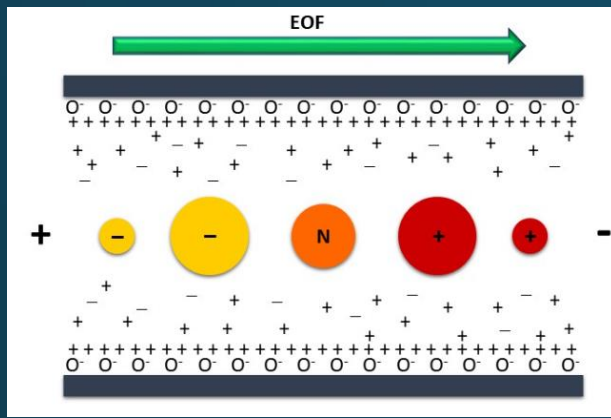


<https://doi.org/10.1021/acsomega.3c00198>

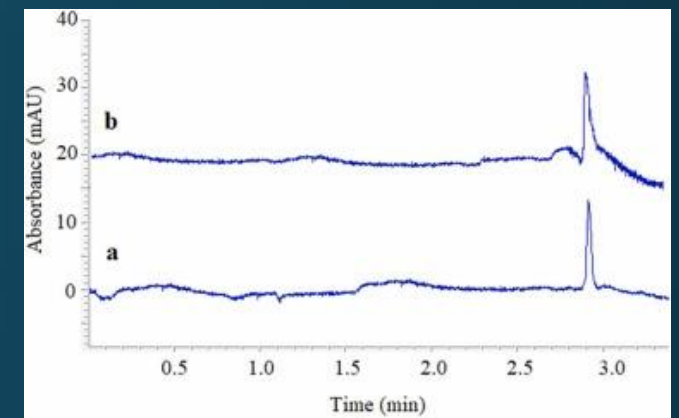


<https://doi.org/10.1002/jssc.202300391>

CAPILLARY ELECTROPHORESIS



Capillary electrophoresis separates analytes based on their size-to-charge ratio under electrical field. Electroosmotic flow (EOF) carries all analytes toward the cathode where the detector is placed.



<https://doi.org/10.1016/j.jfca.2023.105425>

Crustaceans



Chitosan

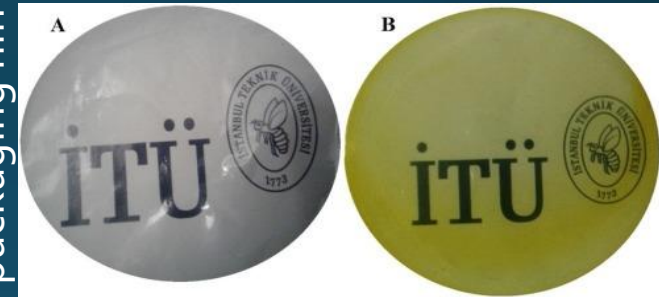
Algae



Alginate, carrageenan, agarose

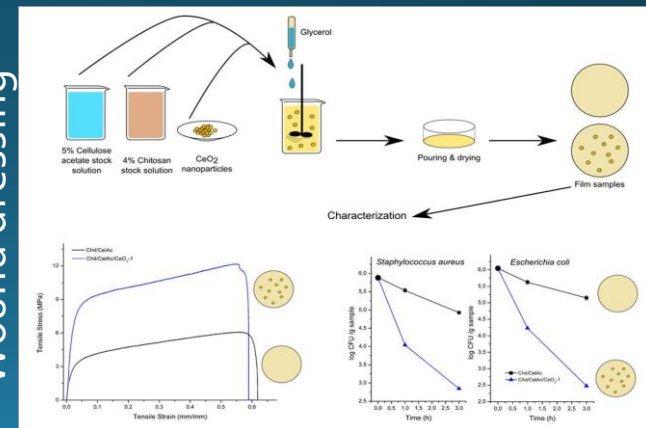
BIO-POLYMERS

Food packaging films



<https://doi.org/10.1016/j.ijbiomac.2017.03.174>

Wound dressing



<https://doi.org/10.1016/j.eurpolymj.2020.109777>