

All publications of the Functional Interfaces Research Group members:

(Author search in the Hungarian Scientific Bibliography)

<https://m2.mtmt.hu/gui2/>

Selected publications:

[Nanostructured functional thin layers](#)

T. Szabó, Z. Garaiová, S. Melikishvili, M. Tatarko, Z. Keresztes, T. Hianik

The Effect of Lipopolysaccharides from *Salmonella enterica* on the Size, Density, and Compressibility of Phospholipid Vesicles

BIOMIMETICS 10 : 1 Paper: 55 , (2025)

<https://doi.org/10.3390/biomimetics10010055>

K. Jakab, B. Varga, Z. Keresztes, V. Horváth

Polymer inclusion membrane for the extraction of oxytetracycline from milk prior to aptamer-based biosensing

MICROCHEMICAL JOURNAL 206 Paper: 111582 , (2024)

<https://doi.org/10.1016/j.microc.2024.111582>

T. Marek, T. Vincze; T. Szabó; Z. Keresztes

Conductive and photo-luminescent functionality of reconstituted particle layers prepared from electrodeposited PEDOT films

MATERIALS CHEMISTRY AND PHYSICS 314 Paper: 128925 , (2024)

<https://doi.org/10.1016/j.matchemphys.2024.128925>

A. Shaban, L. Eddaif, J. Telegdi

Sensors for water and wastewater monitoring

In: Barhoum, Ahmed; Altintas, Zeynep (szerk.)

Advanced Sensor Technology: Biomedical, Environmental, and Construction Applications

Amsterdam, Hollandia : Elsevier Inc. 968 p. pp. 517-563. , (2023)

<https://doi.org/10.1016/B978-0-323-90222-9.00019-4>

T. Szabó, I. Bakos, B. Vrbovszki, I. Jeerapan, P. Pekker, J. Mihály, K. Németh, J. Wang, Z. Keresztes

Dual-Role Peptide with Capping and Cleavage Site Motifs in Nanoparticle-Based One-Pot Colorimetric and Electrochemical Protease Assay

ACS OMEGA 8 pp. 22556-22566. (2023)

<https://doi.org/10.1021/acsomega.3c00771>

K. Jakab; J. Csipor ; I. Ulbert; Z. Keresztes; G. Mészáros; G. Márton

EEG sensor system development consisting of solid polyvinyl alcohol–glycerol–NaCl contact gel and 3D-printed, silver-coated polylactic acid electrode for potential brain–computer interface use

MATERIALS TODAY CHEMISTRY 26 p. 101085 Paper: 101085 (2022)

<https://doi.org/10.1016/j.mtchem.2022.101085>

Y. El Hamdouni; S. El Hajjaj; T. Szabó; L. Trif,; I. Felhősi; K. Abbi; N. Labjar; L. Harmouche; A. Shaban

Biomass valorization of walnut shell into biochar as a resource for electrochemical simultaneous detection of heavy metal ions in water and soil samples: preparation, characterization, and applications

ARABIAN JOURNAL OF CHEMISTRY 15 Paper: 104252 , (2022)

<https://doi.org/10.1016/j.arabjc.2022.104252>

L. Eddaif; I. Felhósi; A. Shaban

In-situ electrochemical and piezogravimetric studies on the application of macrocyclic resorcinarene tetramer in the development of chemically-modified heavy metals ions detection platform in aqueous media

ARABIAN JOURNAL OF CHEMISTRY 15 : 5 Paper: 103780 (2022)

<https://doi.org/10.1016/j.arabjc.2022.103780>

I. Bakos, Á. Vass, E. S. Muckley, I.N. Ivanov, Z. Keresztes

Indirect electrochemical method for high accuracy quantification of protein adsorption on gold surfaces

ELECTROCHEMISTRY COMMUNICATIONS 124, 106961 (2021)

<https://doi.org/10.1016/j.elecom.2021.106961>

T. Marek, G. Orbán, D. Meszéna, G. Márton, I. Ulbert, G. Mészáros, Z. Keresztes

Optimization aspects of electrodeposition of photoluminescent conductive polymer layer onto neural microelectrode arrays

MATERIALS CHEMISTRY AND PHYSICS 260, 124163 (2021)

<https://doi.org/10.1016/j.matchemphys.2020.124163>

L. Románszki, T. Hianik, Z. Keresztes

Plasmin determination based on enzymatic digestion of a β -casein layer at the air/water interface

COLLOIDS AND SURFACES A : PHYSICOCHEMICAL AND ENGINEERING ASPECTS 609, 125786 , (2021)

<https://doi.org/10.1016/j.colsurfa.2020.125786>

L. Románszki, Z. Varga, J. Mihály, Z. Keresztes, M. Thompson

Electromagnetic piezoelectric acoustic sensor detection of extracellular vesicles through interaction with detached vesicle proteins

BIOSENSORS 10 : 11: 173 (2020)

<https://doi.org/10.3390/bios10110173>

L. Eddaif, A. Shaban, J. Telegdi

Sensitive detection of heavy metals ions based on the calixarene derivatives-modified piezoelectric resonators: a review

INTERNATIONAL JOURNAL OF ENVIRONMENTAL ANALYTICAL CHEMISTRY 99 : 9, 824-853 (2019)

<https://doi.org/10.1080/03067319.2019.1616708>

L. Románszki, M. Tatarko, M. Jiao, Z. Keresztes, T. Hianik, M. Thompson

Casein probe-based fast plasmin determination in the picomolar range by an ultra-high frequency acoustic wave biosensor

SENSORS AND ACTUATORS B-CHEMICAL 275, 206-214 (2018)

<https://doi.org/10.1016/j.snb.2018.08.025>