

All publications of the Functional Interfaces Research Group members:

(Author search in the Hungarian Scientific Bibliography)

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

Selected publications:

2D and 3D nanostructure based sensing layers in analytical assays

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, Articles ASAP (Article)

Publication Date (Web): June 9, 2023

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

A. Shaban*, L. Eddaif, T. Szabó*

A Mini-review on the application of chemically modified sensing platforms for the detection of heavy metal ions in water

CURRENT ANALYTICAL CHEMISTRY 19 pp. 199-219. , 21 p. (2023)

<https://doi.org/10.2174/1573411019666221213161240>

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, 13 p. (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, 18 p. (2022)

<https://doi.org/10.1016/j.arabjc.2022.10425>

L. Eddaif.; I. Felhősi; 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 , 16 p. (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>

G. Mészáros , S. Akbarzadeh, B. De La Franier, Z. Keresztes, M. Thompson*
Advances in Electromagnetic Piezoelectric Acoustic Sensor Technology for Biosensor-Based Detection
CHEMOSENSORS 9:3, 58 (2021)
<https://doi.org/10.3390/chemosensors9030058>

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>

A. Shaban*, L. Eddaif
Comparative study of a sensing platform via functionalized Calix[4]resorcinarene ionophores on QCM resonator as sensing materials for detection of heavy metal ions in aqueous environments
ELECTROANALYSIS Paper: elan.202060331 (2021)
<https://doi.org/10.1002/elan.202060331>

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>

M. Pávai, E. Orosz, A. Paszternák*
Smartphone based extension of the curcumin/cellophane pH sensing method
FOOD ANALYTICAL METHODS 9:(4) 1046-1052 (2016)
<https://doi.org/10.1007/s12161-015-0277-5>