

MEDITERRANEAN JOURNAL OF CHEMISTRY

Curriculum Vitae

Dr. Maria Hepel
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CURRENT EMPLOYMENT

Distinguished Professor of Chemistry, Emeriti, State University of New York at Potsdam, Potsdam, NY
Distinguished Professor of Chemistry (2012 to 2022), State University of New York at Potsdam,
Potsdam, NY

PREVIOUS EMPLOYMENT

Chemistry Department Chair (2007-2015), State University of New York at Potsdam, Potsdam, NY
Professor of Chemistry (1991-2012), State University of New York at Potsdam, Potsdam, NY
Adjunct Full Professor (2002 to 2012), Chemistry Department, State University of New York at Buffalo,
Buffalo, NY
Associate Professor (1985-1991), State University of New York at Potsdam, Potsdam, NY
Adjunct Associate Professor, Chemistry Department of SUNY at Buffalo, (1989-2002)
Adjunct Assistant Professor (1984-1985), Chemistry Department and Senior Research Associate in Physics
Department, Brooklyn College of CUNY, Brooklyn, NY 11210
Assistant Professor (1977-1980), Dept. of Physical Chemistry & Electrochemistry, Institute of
Chemistry, Jagiellonian University, 30-060 Krakow, Poland

EDUCATION

Ph.D. in Chemistry: 1976, Institute of Chemistry, Jagiellonian University, Krakow, Poland.
MS in Chemistry: 1969, Institute of Chemistry, Jagiellonian University, Krakow, Poland.
Post-Doctoral Research: Department of Chemistry, State University of New York at Buffalo, 1980-1982;
Department of Physics, Brooklyn College of City University of New York, 1982-1984.

SABBATICAL LEAVE & VISITING RESEARCH

Bristol University, School of Chemistry, England (1991)
Institut für Energieverfahrenstechnik, Jülich, Germany (1992)
Utah University, Materials Engineering Department, Utah (1992)
Syracuse University, Department of Chemistry, (Summer 1990 and 1991)
SUNY Buffalo, Department of Chemistry (Summer 1987, 1988, 1989)
Polish Academy of Science, Biosensors Division, Olsztyn, Poland (2006)
Center for Materials Research in Energy Conversion, University of New South Wales, Sydney, Australia (2006)

PUBLICATIONS

249 publications, 21 invited papers in Special Issues, 44 chapters in books, and 1 book.
Edited 4 American Chemical Society books.

PRESENTATIONS

376 presentations on scientific conferences, including 72 invited talks.

TEACHING EXPERIENCE

Thirty years of teaching experience. Courses taught:

- 1) Nanobiotechnology/Nanomedicine
- 2) Quantitative Chemical Analysis (lectures, labs, and recitation)
- 3) Instrumental Analysis (lectures and labs)
- 4) Electrochemistry (lectures)
- 5) Physical Chemistry (labs and recitations)
- 6) General Chemistry (labs and recitations)

- 7) Electrochemistry of Semiconductors (lectures)
- 8) Analysis in Biology and Medicine (lectures)
- 9) Clinical Analysis (lectures)
- 10) Analytical Techniques in Human Toxicology (lectures)
- 11) Electroanalytical Techniques in Clinical Chemistry (lectures)
- 12) Forensic Science (lectures)
- 13) Advanced Analytical “Modern Electroanalytical Techniques” (lectures)
- 14) Advanced Analytical “AFM/STM Techniques” (lectures)

RESEARCH EXPERIENCE

1. Targeted Controlled Delivery of Anticancer Drugs from Functionalized Gold nanoparticles with different shapes.
2. Gold/Magnetic Core-Shelled Nanostructures for Cancer Biomarker Detection.
3. Targeted Controlled Release of Anthracyclines from Apo-Ferritin Nanocages.
4. Detection of Cancer Biomarkers Using Surface Enhanced Raman Spectroscopy
5. Nanotechnology—Molecular Wires, Metallic Nanobridges
6. Imaging of metal nanoclusters, polymers, and biomolecules using AFM/STM and Raman spectroscopy.
7. Gold Core-Shelled Nanoparticles for Biomolecules Detection and Drug and Gene Delivery Systems.
8. Monolayers, Surfaces, and Thin Films (Proteins at Interfaces; Proteins Conformation Changes; Drugs Adsorption; Interactions of Drugs with Proteins, DNA, Glutathione, Neurotransmitters, Cysteine, Melanin and Metals; Self-Assembled Monolayers; Oxidative Stress and DNA Damage; Antioxidants; UPD (Underpotential Deposition of Metals)
9. Biosensors, Immunosensors, DNA sensors, Receptor-based sensors, Oxidative DNA damage, Binding of drugs and dyes to DNA films; Ion-gating.
10. Fluorescence Spectroscopy and Fluorescence Energy Transfer applied to analysis of DNA and proteins.
11. Resonance Elastic Light Scattering of functionalized gold nanoparticle assembly/disassembly processes.
12. Redox Reactions of Drugs and Biomolecules at Phospholipid and Dye Modified Electrodes. Ion-channels in Phospholipid/Gramicidin Films and Glutathione Films.
13. Adsorption Phenomena at Solid Electrodes (Adsorption Isotherms, Influence on Electrode Kinetics, Passivation, Electrocatalysis).
14. Controlled Release of Drugs and Biomolecules from Conductive Polymers.
15. Electrochromic Materials.
16. Gold Core-Shelled Nanostructures and Dispersed Metal Nanoparticles in Polymer Matrix for Fuel Cell and Electrocatalysis Applications.
17. Electroanalysis (cathodic and anodic stripping voltammetry, cyclic voltammetry, rotating disk and ring-disk electrode technique, normal pulse voltammetry, differential pulse voltammetry, chronoamperometry, chronopotentiometry, chronocoulometry, polarography, impedance and admittance measurements, etc.)
18. Electrochemistry (mechanism and kinetics of electrode reactions at solid electrodes).
19. Photoelectrochemistry of semiconductors, Dye Photosensitization, Nanostructures, Photoelectrochemical Dye Degradation.
20. Battery: Zn/KOH/AgO (charging and discharging processes, impedance measurements of porous Ag, Ag₂O, AgO electrodes).
21. Conductive Polymer Films/Composite Conductive Polymers/Ion Dynamics in Conductive Polymers.
22. Electrochemistry of non-stoichiometric copper sulfides.
23. Piezoelectric Quartz Crystal Nanobalance (EQCN) Technique & Quartz Crystal Immittance (ACI) Technique.
24. Corrosion Testing using EQCN, QCI, SEM and AFM techniques. Effect of green inhibitors on copper corrosion.
25. Monolayer and Thin Film Studies Using Scanning Probe Microscopy Techniques.

MEMBER OF SCIENTIFIC SOCIETIES

1. American Chemical Society
2. Electrochemical Society, Inc.
3. American Physical Society (1982-1985)
4. International Society of Electrochemistry
5. New York Academy of Science

6. Society for Electroanalytical Chemistry
7. Controlled Release Society (1996-1998)
8. International Bioelectrochemistry Society

AWARDS AND HONORS

- Outstanding Teaching Assistant, Krakow, Jagiellonian University, 1974.
- Chancellor's Award for Research Achievements, Krakow, Jagiellonian University, 1977.
- Ministry of Science Award for Outstanding Ph.D. Thesis, Poland, 1977.
- Chemical Society Award for Outstanding Research, Poland, 1978.
- Member of the Academic Honor Society, Phi Kappa Phi.
- Member of the Chemistry Honor Society, Gamma Sigma Epsilon.
- Member of the Scientific Research Honor Society, Sigma Xi.
- Citation in "Who's Who in Science & Engineering."
- Citation in "Who's Who in the World."
- Citation in "Who's Who of American Women."
- Citation in "Who's Who of American Education."
- Citation in "Who's Who of Polish American."
- Citation in "Who's Who Among American Teachers 2002"
- Citation in "The Contemporary Who's Who" by the American Biographical Institute
- Citation in "Who's Who in America", 55th Edition, 2001, 56th Edition, 2002.
- Citation in "2000 Outstanding Scientists of the 21st Century", 1st Edition.
- Citation in 2000 "The Roll of Honor of the Polish Science".
- President's Award for Excellence in Research & Creative Endeavor, SUNY College at Potsdam, 1995.
- Chancellor Award for Excellence in Teaching, SUNY, Albany, 1998.
- Member of Iota Sigma Phi National Honor Society for Women in Chemistry.
- President's Award for Excellence in Research & Creative Endeavor, SUNY College at Potsdam, May 2001.
- Research Advisor Recognition Award 2001/2002, CSTEP, SUNY Potsdam.
- SUNY Research Recognition Award (Albany, October 2002).
- Chancellor's Award for Excellence in Research and Creative Endeavor, SUNY, May 2007.
- American Association of University Women (AAUW) Research Award – November 5, 2009
- Received nomination for the Distinguished SUNY Professor, May 10, 2012
- The 2012 Northeast Region ACS Award for Achievements in the Chemical Sciences, October 2, 2012
- The American Chemical Society National Award for Research with Undergraduate Students, 2016

GRANTS AWARDED (total: \$ 1,463,418)

National Science Foundation, National Institute of Health, Department of Defense, Cottrell Foundation, American Chemical Society Petroleum Research Fund, and others (total: \$ 1,463,418.

PROFESSIONAL ACTIVITIES (2007-2023)

Book Editor of the American Chemical Society book "*Functional Nanoparticles for Bioanalysis and Electronic Devices*", Vol. 1112 and Vol. 1113, American Chemical Society, Washington, DC, Oxford University Press, 2012

Book Editor of the American Chemical Society book "*Oxidative Stress: Diagnosis, Prevention and Therapy*", ACS Symposium Series, Vol. 1083, American Chemical Society, Washington, DC, Oxford University Press, 2011.

Book Editor of the American Chemical Society book "*Oxidative Stress: Diagnosis, Prevention and Therapy*", ACS Symposium Series, Vol. 1200, American Chemical Society, Washington, DC, Oxford University Press, 2015

Member of the Editorial Board of the "Journal of Nanomedicine and Nanotechnology".

Member of the Editorial Board of the "International Journal of Nano Studies & Technology"

Member of the Editorial Board of the "Austin Journal of Nanomedicine & Nanotechnology & Bionanotechnology"

Member of the Editorial Board of the "Austin Journal of Biosensors & Bioelectronics"

Member of the Editorial Board of the "JSM Nanotechnology and Nanomedicine"

Member of the Editorial Board of the "JSM Analytical and Bioanalytical Techniques"

Member of the Editorial Board of the "Polish Journal of Environmental Studies"

Associate Editor of the "Mediterranean Journal of Chemistry".

Member of the Editorial Board of the SF Journal of Pharmaceutical and Analytical Chemistry.

Review Editor of the "Frontiers in Physical Chemistry & Chemical Physics"

Invited to be contributing Author to 18 volumes of different Special Issues of the following journals: *Electrochimica Acta*, *Journal of the Electroanalytical Chemistry*, *International Journal of Hydrogen Energy*, *Bioelectrochemistry*, *Elektrokhimiya*, and *Electroanalysis*,

Organizer of the Symposium "Graphene-Based Nanomaterials for Biosensors, Nanomedicine and Bioelectronic Applications" at the National Meeting of the American Chemical Society, San Francisco, CA, August 10-14, 2014

Organizer of the Symposium "Functional Nanoparticles for Bioanalysis and Electronic Devices" at the National Meeting of the American Chemical Society, Denver, CO, Aug. 28 - Sept. 1, 2011.

Program Chair of the Northeast Regional Meeting of the American Chemical Society, NERM'2010 held at SUNY Potsdam, June 2-5, 2010.

Contributing coauthor to the "Electrochemical Dictionary", Editors: F. Scholtz, G. Inzelt, A. Bard, Publisher: Springer Verlag, Heidelberg, Germany, 2008

REVIEWER OF PROPOSALS

Reviewer of the proposals for the National Science Foundation (NSF).

Reviewer of the proposals for the International Science Foundation (ISF).

Reviewer of the proposals for the Petroleum Research Fund, American Chemical Society.

Reviewer of the proposals for the Research Corporation Fund.

Reviewer of the proposals for King Fahd University of Petroleum, Saudi Arabia.

Reviewer of the proposals for the United States Department of Agriculture, SBIR Programs.

Reviewer of the proposal for the Austrian National Science Foundation.

REVIEWER OF PAPERS FOR SCIENTIFIC JOURNALS (38 international Journals)

RESEARCH COLLABORATIONS WITH OTHER UNIVERSITIES

Cancer Institute, University of Albany, NY, in the field of testing anticancer drugs. (2016 - till present)

Department of Materials Science & Engineering, SUNY at Stony Brook in the field of supercapacitors (2014-till present)

Department of Chemistry, SUNY at Binghamton in the field of SERS nanoprobe for DNA detection and imaging (2013-till present)

Institute of Chemistry, University of Warsaw, Poland, in the field of DNA biosensors (2009 – till present).

Masaryk University, Department of Biochemistry, Brno, Czech Republic in the field of immunosensors and biosensors (1999-till present).

Polish Academy of Science, Institute of Food Research, Olsztyn, Poland in the field of detecting toxins in food products and proteins adsorption (2003-till present).

SUNY at Buffalo in the field of UPD films (1985-1990).

Syracuse University in the field of size-quantized semiconductors (1989-1994).

Department of Chemistry, SUNY at Binghamton in the field of nanostructured nanoparticles (2010-2021).

M. Hepel - LIST OF PEER-REVIEWED PUBLICATIONS

*(259 publications, including: 179 papers published in peer-reviewed journals, 25 invited papers in Special Issues, 44 chapters in books and 1 book, 4 edited books, 7 patents; * - senior Author)*

over 5300 citations, h-index: 41, i10-index: 94, i100-index: 16 (Google Scholar)

“High Power-Density WO_{3-x}-Grafted Corannulene-Modified Graphene Nanostructures for Micro-Supercapacitors”;

★Invited paper for the Special Issue honoring Professor Z. Stojek.

J. Electroanal. Chem. **2023**, 928, 116990;

DOI: 10.1016/j.jelechem.2022.116990

Maria Hepel, Marina A. Petrukhina, Vladimir Samuilov

GRABOWSKA I., HEPEL M., KURZATKOWSKA-ADASZYNSKA K.

“Advances in Design Strategies of Multiplex Electrochemical Aptasensors”

Sensors **2022**, 22 (1), 161;

DOI: 10.3390/s22010161.

HEPEL M.

“Advances in micro-supercapacitors (MSCs) with high energy density and fast charge-discharge capabilities for flexible bioelectronic devices - A review”;

★Invited paper for the Special Issue on *Electrochemical Advances*.

Electrochem. Sci. Adv. **2022**, 2, e2100222;

DOI: 10.1002/elsa.202100222.

KURZATKOWSKA K.; PAZOS M.A.P.; HERSCHKOWITZ J.I.; HEPEL M.

“Cancer-Targeted Controlled Delivery of Chemotherapeutic Anthracycline Derivatives Using Apoferritin Nanocage Carriers” - A review paper

Int. J. Molec. Sci. **2021**, 22(3), 1362;

DOI: 10.3390/ijms22031362.

ILKHANI H.; ZHONG C.-J.; HEPEL M.

“Magneto-Plasmonic Nanoparticle Grid Biosensor with Enhanced Raman Scattering and Electrochemical Transduction for the Development of Nanocarriers for Targeted Delivery of Protected Anticancer Drugs”

Nanomaterials **2021**, 11(5), 1326;

DOI: 10.3390/nano11051326.

HEPEL M.

“Magnetic nanoparticles for nanomedicine” - - A review paper

Magnetochemistry, **2020**, 6(1), 3 (pp.1-17);

★Invited paper for the Special Issue on *Magnetic Nanoparticles*.

DOI: 10.3390/magnetochemistry6010003.

RUNNING L., ESPINAL R. and HEPEL M.*

"Controlled release of targeted chemotherapeutic drug dabrafenib for melanoma cancers monitored using surface-enhanced Raman scattering (SERS) spectroscopy"

Mediterranean Journal of Chemistry, 7(1) (2018) 18-27;

DOI: 10.13171/mjc71/01803171500-hepel

HEPEL M.* and STOBIECKA M.

"Supramolecular Interactions of Oxidative Stress Biomarker Glutathione with Fluorone Black"

Spectrochimica Acta A, 192 (2018) 146-152;

DOI: 10.1016/j.saa.2017.11.017.

SANTIAGO T., DeVAUX R.V., KURZATKOWSKA K., ESPINAL R.,

HERSCHKOWITZ J.I., and HEPEL M.*

"Surface-enhanced Raman scattering investigation of targeted delivery and controlled release of gemcitabine"

International Journal of Nanomedicine, 12 (2017) 7763-7776;

DOI: 10.2147/IJN.S149306.

SMITH M. and HEPEL M.*

"Controlled release of targeted anti-leukemia drugs azacitidine and decitabine monitored using surface-enhanced Raman scattering (SERS) spectroscopy"

Mediterranean Journal of Chemistry, 6(4) (2017) 125-132;

DOI: 10.13171/mjc64/01706081223-hepel

KURZATKOWSKA K., SANTIAGO T., and HEPEL M.*

"Plasmonic nanocarrier grid-enhanced Raman sensor for studies of anticancer drug delivery"

Biosensors and Bioelectronics, 91 (2017) 780-787.

ILKHANI H., HUGHES T., LI J., ZHONG C.J.*, and HEPEL M.*

"Nanostructured SERS-electrochemical biosensors for testing of anticancer drug interactions with DNA"

Biosensors and Bioelectronics, 80 (2016) 257-264;

DOI: 10.1016/j.bios.2016.01.068.

LI J., SKEETE Z., SHAN S., YAN S., KURZATKOWSKA K., ZHAO W., NGO Q.M., HOLUBOVSKA P., LUO J., HEPEL M.*, and ZHONG C.J.*

"Surface Enhanced Raman Scattering Detection of Cancer Biomarkers with Bifunctional Nanocomposite Probes"

Analytical Chemistry, 87 (2015) 10698-10702;

DOI: 10.1021/acs.analchem.5b03456.

RICE C.A.*, BETANCOURT D., and HEPEL M.*

"Platinum Oxide Growth on Pt/C Fuel Cell Catalysts Using Asymmetric Scan Electrochemical Quartz Crystal Nanogravimetry"

Electrocatalysis, 6 (2015) 1-6,

DOI: 10.1007/s12678-014-0221-2.

XU H., WALLACE R., and HEPEL M.*

"Interactions of antifouling monolayers. Energy transfer from excited albumin molecule to Phenol Red dye"

✪Invited paper for the Special Issue on *Biosensors*.

Chemical Papers, 69 (2015) 227-236.

KUBESA O., MORRISEY K., MATTHEWS S., PROETTA J., LI C. SKLADAL P.*, HEPEL M.*

"Design of Novel Biosensors for Determination of Phenolic Compounds using Catalyst-Loaded Reduced Graphene Oxide Electrodes"

Mediterranean Journal of Chemistry, 3 (2014) 916-928.

HEPEL M.*, DELA-MOSS L.I., and REDMOND H.

"Lattice polarization effects in electrochromic switching in WO_{3-x} films studied by pulse-nanogravimetric technique"

✪Invited paper for the Special Issue devoted to the memory of Professor V.S.

Bagotzky.

Journal of Solid State Electrochemistry, 18 (2014) 1251-1260;

DOI: [10.1007/s10008-013-2219-8](https://doi.org/10.1007/s10008-013-2219-8)

NOWICKA A.M., STOJEK Z., HEPEL M.*

"Chromium(VI) but not chromium(III) species decrease mitoxantrone affinity to DNA"
Journal of Physical Chemistry B, 117 (2013) 1021–1030.

HEPEL M.*, STOBIECKA M., PEACHEY J., and MILLER J.

"Intervention of glutathione in pre-mutagenic catechol-mediated DNA damage in the presence of copper(II) ions"

Mutation Research 735 (2012) 1-11.

STOBIECKA M., MOLINERO A.A., CHALUPA A., HEPEL M.*

"Mercury/homocysteine ligation-induced ON/OFF switching of a T-T mismatch-based oligonucleotide molecular-beacon"

Analytical Chemistry 84 (2012) 4970-4978, DOI: 10.1021/ac300632u.

HEPEL M.*, STOBIECKA M.

"Comparative Kinetic Model of Fluorescence Enhancement in Selective Binding of Monochlorobimane to Glutathione"

Journal of Photochemistry and Photobiology A 225 (2011) 72-80.

STOBIECKA M., HEPEL M.*

"Double-Shell Gold Nanoparticle-Based DNA-Carriers with Poly-L-lysine Binding Surface"

Biomaterials 32 (2011) 3312-3321.

STOBIECKA M., HEPEL M.*

"Effect of Buried Potential Barrier in Label-less Electrochemical Immunodetection of Glutathione and Glutathione-Capped Gold Nanoparticles"

Biosensors and Bioelectronics 26 (2011) 3524-3530.

STOBIECKA M., HEPEL M.*

"Multimodal Coupling of Optical Transitions and Plasmonic Oscillations in Rhodamine B Modified Gold Nanoparticles"

Physical Chemistry Chemical Physics 13 (2011) 1131–1139; 13 (2011) 16446–16448.

HEPEL M.*, STOBIECKA M.

"Microsensor Arrays for Determination of Biomarkers of Oxidative Stress",

ECS Transactions, 35 [7] (2011) 125-134.

HEPEL M.*, STOBIECKA M.

"Novel DNA-Hybridization Biosensors for Studies of Atrazine Interactions with DNA",

★Invited paper for *Advances in Environmental Research* 6 (2011) 253-298.

STOBIECKA M., HEPEL M.*

"Nitrotyrosine as a Biomarker of Diabetes",

★Invited paper for *Advances in Medicine and Biology* 13 (2011) 177-202.

XU H. and HEPEL M.*,

"Molecular Beacon-Based Fluorescent Assay for Selective Detection of Glutathione and Cysteine",

Analytical Chemistry 83 (2011) 813-819.

NOWICKA A.M., KOWALCZYK A., DONTEN M., LEECH D., HEPEL M.*, STOJEK Z.*,

"Substantial Influence of Temperature on Anchoring of Gold-Nanoparticle Monolayer for Performance of DNA Biosensors"

Electroanalysis 22 (2010) 2323-2329.

PRANCE A., COOPERSMITH K., STOBIECKA M., HEPEL M.*

Biosensors for Detection of DNA Damage by Toxicants,
ECS Transactions 33 [8] (2010) 3-15.

STOBIECKA M, CUTLER S., REED Z., PRANCE A., HEPEL M.*
Detection of Oxidative Stress Biomarker Homocysteine Utilizing Resonance Elastic Light Scattering,
ECS Transactions 28 [18] (2010) 115-128.

PRANCE A., REED Z., STOBIECKA M., HEPEL M.*
Resonance Elastic Light Scattering and Plasmonic Phenomena in Glutathione-Mediated Gold Nanoparticle Assembly,
ECS Transactions 28 [20] (2010) 43-57.

STOBIECKA M., COOPERSMITH K., CUTLER S., HEPEL M.*
Novel DNA-Hybridization Biosensors for Studies of DNA Underwinding Caused by Herbicides and Pesticides,
ECS Transactions 28 [34] (2010) 1-12.

STOBIECKA M., HEPEL M.*
Rapid Functionalization of Metal Nanoparticles by Moderator-Tunable Ligand-Exchange Process for Biosensor Designs,
Sensors Actuators, B: Chemical 149 (2010) 373-380.

STOBIECKA M., COOPERSMITH K., HEPEL M.*
Resonance Elastic Light Scattering (RELS) Spectroscopy of Fast Non-Langmuirian Ligand-Exchange in Glutathione-Induced Gold Nanoparticle Assembly,
J. Colloid and Interface Science 350 (2010) 168-177.

STOBIECKA M., DEEB J., HEPEL M.*
"Ligand Exchange Effects in Gold Nanoparticle Assembly Induced by Oxidative Stress Biomarkers: Homocysteine and cysteine",
Biophysical Chemistry 146 (2010) 98-107.

NOWICKA A.M., KOWALCZYK A., STOJEK Z., HEPEL M.*
Nanogravimetric and Voltammetric DNA-Hybridization Biosensors for Studies of DNA Damage by Common Toxicants and Pollutants",
Biophysical Chemistry 146 (2010) 42-53.

HEPEL M.*, WICKHAM D.
"Large Cation Model of Dissociative Reduction of WO_{3-x} Lattice Studied by EQCN and AFM"
ECS Transactions 19 [23] (2009) 11-23.

STOBIECKA M., DEEB J., HEPEL M.*
"Molecularly Templated Polymer Matrix Films for Biorecognition Processes: Sensors for Evaluating Oxidative Stress and Redox Buffering Capacity"
ECS Transactions 19 [28] (2009) 15-32.

NOWICKA A, HAFNER S., HEPEL M.*
"Antineoplastic Drug Interactions with DNA Modified Gold Piezoelectrodes"
ECS Transactions 19 [28] (2009) 1-13.

HEPEL M.*, REDMOND, H.
"Large Cation Model of Dissociative Reduction of Electrochromic WO_{3-x} Films"
Central European Journal of Chemistry 7 (2009) 234-245.

HEPEL M.*, DALLAS J.

"Multifunctional Polypeptide EQCN Sensors: Probing the Cysteamine-Glutathione Film Permeability with Hg(II) Ions"
Sensors **8** (2008) 7224-7240.

HEPEL M. *, DALLAS J., NOBLE M.D.

"Interactions and Reactivity of Hg(II) on Glutathione Modified Gold Electrode Studied by EQCN Technique "

Journal of Electroanalytical Chemistry **622** (2008) 173-183.

HEPEL M. *, DALLAS J.

"Environmental Aspects of GSH Redox Regulation and Oxidative Stress"

Chemicke Listy **102** (2008) 96-97.

HEPEL M. *

"Electrochemical Formation of Quantum Conductance Cu-Metal Nanobridges"

★Invited paper for the Special Issue on "*Fundamentals and Applications of Electrocrystallization*",
Elektrokhimiya **44** (2008) 716-729.

HEPEL M. *, DALLAS J., NOBLE M.D.

"Glutathione Modified Gold Piezoelectric and Voltammetric Sensors for Determination of Mercury in a Wide Concentration Range"

Sensors and Transducers **88** (2008) 47-58.

SCENDO M., HEPEL M. *

"Inhibiting Properties of Benzimidazole Films for Cu(II)/Cu(I) Reduction in Chloride Media Studied by RDE and EQCN Techniques"

Journal of Electroanalytical Chemistry **613** (2008) 35-50.

HEPEL M. *

"Electrochromic WO₃ Films: Nanotechnology Experiments in Upper Division Courses in Instrumental Analysis and Physical Chemistry Laboratories"

Journal of Chemical Education **85** (2008) 125-127; on-line Supplement: pp. 1-37.

HEPEL M. *, REDMOND H., DELA I.

"Electrochromic WO_{3-x} Films with Reduced Lattice Deformation Stress and Fast Response Time"

Electrochimica Acta **52** (2007) 3541-3549.

HEPEL M. *, KUMARIHAMY I.,

"Nanocrystalline Structure and Nanopore Formation in Modified Thermal TiO₂ Films"

★Invited paper for the Special Issue on "*Solar-Hydrogen*",
International Journal of Hydrogen Energy **32** (2007) 2693-2702.

HEPEL M. *, STOBIECKA M.

"Interactions of Adsorbed Albumin with Underpotentially Deposited Copper on Gold Piezoelectrodes"

★Invited paper to the Special Issue: "*Selection of Papers from the 18th International Symposium on Bioelectrochemistry BES-ISE 2005*",
Bioelectrochemistry **70** (2007) 155-164.

HEPEL M. *, DELA I., HEPEL T., LUO J., ZHONG C.J.

"Novel Dynamic Effects in Electrocatalysis of Methanol Oxidation on Supported Nanoporous TiO₂ Bimetallic Nanocatalysts",

★Invited paper to the special issue: "*Surface Imaging/Spectroscopy at the Solid/Liquid Interface*",
Electrochimica Acta **52** (2007) 5529-5547.

SCENDO M., HEPEL M. *

"Inhibiting Properties of BIM for Cu(II)/Cu(I) Reduction in Chloride Media Studied by RDE and EQCN Techniques", *Corrosion Science* **49** (2007) 3381-3407.

HEPEL M. *

"Quantum Conductance of Monatomic Ni Nanobridges"

Electrochimica Acta 51 (2006) 5811-5824.

HEPEL M.*, KUMARIHAMY I., ZHONG C.J.,

"Nanoporous TiO₂-Supported Bimetallic Catalysts for Methanol Oxidation in Acidic Media"

Electrochemistry Communications 8/9 (2006) 1439-1444.

PRIBYL J., HEPEL M.*, and SKLADAL P.*

"Piezoelectric Immunosensors for Polychlorinated Biphenyls Operating in Aqueous and Organic Phases",

Sensors and Actuators, B: Chemical 113 (2006) 900-910.

HEPEL M.*

"Effect of Albumin on Underpotential Lead Deposition and Stripping on Ag-RDE",

★Invited paper for the Special Issue: "In Memory of Professor R.A. Osteryoung",

Electroanalysis 17 (2005) 1401-1412.

STOBIECKA M., HEPEL M.* and RADECKI J.

"Transient Conformation Changes of Albumin Adsorbed on Gold Piezoelectrodes",

★Invited paper to the Special Issue: "Electrochemistry from Nanostructures to Power Plants",

Electrochimica Acta 50 (2005) 4873-4887.

HEPEL M.* and HAZELTON S.

"Photoelectrochemical Degradation of Diazo Dyes on Nanostructured Electrodes",

★Invited paper to the Special Issue: "Electrochemistry from Nanostructures to Power Plants",

Electrochimica Acta 50 (2005) 5278-5291.

HEPEL M.* and TEWKSBURY E.

"Nanogravimetric Study of Templated Copper Deposition in Ion-Channels of Self-Assembled Glutathione Films on Gold Piezoelectrodes",

★Invited paper to the Special Issue: "The Role of Electrochemistry in the Sustained Development of Modern Societies",

Electrochimica Acta 49 (2004) 3827-3840.

HEPEL M.* and TEWSKBURY, E.

"Ion-Gating Phenomena of Self-Assembling Glutathione Films on Gold Piezoelectrodes",

★Invited paper to the Special Issue honoring Professor B. Damaskin,

J. Electroanalytical Chemistry 552 (2003) 291-305.

PRIBYL, J., HEPEL M.*, HALAMEK, J., and SKLADAL, P.*

"Development of Piezoelectric Immunosensors for Competitive and Direct Determination of Atrazine",

Sensors and Actuators, B: Chemical 91(2003) 333-341.

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