

Contents of Volume 63

Vol. 63 Nos. 1–2

Special Issue: Proceedings of the XVIIth International Symposium on Bioelectrochemistry and Bioenergetics

Guest Editor: R. Guidelli

Editorial

R. Guidelli	1
-----------------------	---

Electrified Interfaces

Self-assembled monolayers of organosulphur molecules bearing calix[4]arene moieties O. Cavalleri, M. Vignolo, G. Strano, C. Natale, R. Rolandi, S. Thea, M. Prato, G. Gonella, M. Canepa and A. Gliozzi	3
Immobilization of a fluorescent dye in Langmuir-Blodgett films M. Mannini, F. Gambinossi, P. Baglioni and G. Caminati	9
Langmuir-Blodgett films incorporating redox mediators for molecular recognition of NADH B. Mecheri, L. Piras and G. Caminati	13
Cyclic voltammetric study of the redox system of glutathione using the disulfide bond reductant tris(2-carboxyethyl)phosphine R. Kizek, J. Vacek, L. Trnková and F. Jelen	19
Electroanalytical determination of d(GCGAAGC) hairpin L. Trnková, I. Postbieglová and M. Holik	25
Square wave and elimination voltammetric analysis of azidothymidine in the presence of oligonucleotides and chromosomal DNA L. Trnková, R. Kizek and J. Vacek	31
Application of thin film mercury electrodes and solid amalgam electrodes in electrochemical analysis of the nucleic acids components: detection of the two-dimensional phase transients of adenosine S. Hasoň and V. Vetterl	37

Electron Transport in Biosystems

Redox-triggered events in cytochrome <i>c</i> nitrite reductase J.D. Gwyer, H.C. Angove, D.J. Richardson and J.N. Butt	43
Spectroelectrochemical study of heme- and molybdopterin cofactor-containing chicken liver sulphite oxidase E.E. Ferapontova, A. Christenson, A. Hellmark and T. Ruzgas	49
Cyclic voltammetry and voltabsorptometry studies of redox proteins immobilised on nanocrystalline tin dioxide electrodes Y. Astuti, E. Topoglidis, G. Gilardi and J.R. Durrant	55
Analysis of the interaction of a hybrid system consisting of bovine adrenodoxin reductase and flavodoxin from the cyanobacterium <i>Anabaena</i> PCC 7119 A. Zöllner, I. Nogués, A. Heinz, M. Medina, C. Gómez-Moreno and R. Bernhardt	61
Study of temperature influence on electron transport in higher plants via delayed luminescence method: experiment, theory D.Z. Badretdinov, E.A. Baranova and A.K. Kukushkin	67

Bioenergetics and Signal Transduction

Electron transfer kinetics in photosynthetic reaction centers embedded in polyvinyl alcohol films F. Francia, L. Giachini, G. Palazzo, A. Mallardi, F. Boscherini and G. Venturoli	73
Binding of single nucleotides to H ⁺ -ATP synthases observed by fluorescence resonance energy transfer S. Steigmiller, B. Zimmermann, M. Diez, M. Börsch and P. Gräber	79
Feedback loops in the signal paths controlling gene expression F. Šrobár	87

Photobioelectrochemistry

Bioelectrochemical signaling in green plants induced by photosensory systems A.G. Volkov, T.C. Dunkley, S.A. Morgan, D. Ruff II, Y.L. Boyce and A.J. Labady	91
A theoretical model for electron and proton coupling at quinone-binding site of photosystem II of higher plants R.V. Belousov, S.V. Poltev and A.K. Kukushkin	95
Photoelectrochemical study on photosynthetic pigments-sensitized nanocrystalline ZnO films A. Petrella, P.D. Cozzoli, M.L. Curri, M. Striccoli, P. Cosma and A. Agostiano	99
Enrichment of cardiolipin content throughout the purification procedure of photosystem II N. Depalo, L. Catucci, A. Mallardi, A. Corcelli and A. Agostiano	103
Spectroscopic and electrochemical study of Rose Bengal in aqueous solutions of cyclodextrins P. Fini, F. Longobardi, L. Catucci, P. Cosma and A. Agostiano	107
Role of endogenous lipids in the chromophore regeneration of bacteriorhodopsin L. Catucci, V.M.T. Lattanzio, S. Lobasso, A. Agostiano and A. Corcelli	111
Photophysical and electrochemical properties of chlorophyll <i>a</i> –cyclodextrins complexes P.L. Dentuto, L. Catucci, P. Cosma, P. Fini and A. Agostiano	117
Evaluation of chlorophyll fluorescence and membrane injury in the leaves of barley cultivars under osmotic stress K. Kocheva, P. Lambrev, G. Georgiev, V. Goltsev and M. Karabaliev	121
pH-sensitive fluorescent dye as probe for proton uptake in photosynthetic reaction centers A. Agostiano, F. Mavelli, F. Milano, L. Giotta, M. Trotta, L. Nagy and P. Maroti	125

Biomembranes and Model Membranes

The mechanisms of lipid–protein rearrangements during viral infection Y.A. Chizmadzhev	129
Spectroelectrochemical studies of bilayers of phospholipids in gel and liquid state on Au(111) electrode surface I. Zawisza, X. Bin and J. Lipkowski	137
How do P-Type ATPases transport ions? H.-J. Apell	149
Calcium transport by sarcoplasmic reticulum Ca-ATPase can be investigated on a solid-supported membrane G. Bartolommei, F.T. Buoninsegni and M.R. Moncelli	157
Tethered bilayer lipid membranes self-assembled on mercury electrodes M.R. Moncelli, L. Becucci and S.M. Schiller	161
The study of the interaction of a model α -helical peptide with lipid bilayers and monolayers P. Vitovič, S. Kresák, R. Naumann, S.M. Schiller, R.N.A.H. Lewis, R.N. McElhaney and T. Hianik	169
Interaction of thin wetting films of lecithin with some divalent cations M. Karabaliev and V. Kochev	177
Shape transformation of giant phospholipid vesicles at high concentrations of C ₁₂ E ₈ B. Mavčič, B. Babnik, A. Iglič, M. Kandušer, T. Slivnik and V. Kralj-Iglič	183
Influence of PAMAM dendrimers on human red blood cells D.M. Domański, B. Klajnert and M. Bryszewska	189
Incorporation of fluorescent probes into PAMAM dendrimers D.M. Domański, B. Klajnert and M. Bryszewska	193

Biosensors and Bioelectronics

An integrated bienzyme glucose oxidase–fructose dehydrogenase–tetrathiafulvalene-3-mercaptopropionic acid–gold electrode for the simultaneous determination of glucose and fructose S. Campuzano, Ó.A. Loaiza, M. Pedrero, F.J.M. de Villena and J.M. Pingarrón	199
Chemical imaging of biological systems with the scanning electrochemical microscope R.E. Gyurcsányi, G. Jággerszki, G. Kiss and K. Tóth	207
Application of integrated SECM ultra-micro-electrode and AFM force probe to biosensor surfaces Y. Hirata, S. Yabuki and F. Mizutani	217
Real-time scanning tunnelling microscopy imaging of protein motion at electrode surfaces C.M. Halliwell, J.A. Davies, J.C. Gallop and P.W. Josepht-Franks	225
Atomic force microscopy characterization of an electrochemical DNA-biosensor A.-M. Chiorcea and A.M. Oliveira Brett	229

New acridone derivatives for the electrochemical DNA-hybridisation labelling	
B. Wang, L. Bouffier, M. Demeunynck, P. Mailley, A. Roget, T. Livache and P. Dumy	233
Voltammetric behavior of DNA modified with osmium tetroxide 2,2'-bipyridine at mercury electrodes	
L. Havran, M. Fojta and E. Paleček	239
Voltammetry of osmium-modified DNA at a mercury film electrode: Application in detecting DNA hybridization	
P. Kostecka, L. Havran, H. Pivonkova and M. Fojta	245
Microanalysis of DNA by stripping transfer voltammetry	
F. Jelen, A. Kouřilová, P. Pečinka and E. Paleček	249
Electrochemical measurement of phenothiazine-interacted DNA	
S. Yabuki and F. Mizutani	253
Amperometric measurement of ds-DNA content using a peroxidase-modified electrode	
F. Mizutani, S. Yabuki, Y. Sato and S. Iijima	257
Amperometric biosensor based on denatured DNA for the study of heavy metals complexing with DNA and their determination in biological, water and food samples	
S.S. Babkina and N.A. Ulakhovich	261
Electrochemical determination of 8-oxoguanine in the presence of uric acid	
I. Rebelo, J.A.P. Piedade and A.M. Oliveira Brett	267
Reversible immobilization of engineered molecules by Ni-NTA chelators	
J. Maly, C. Di Meo, M. De Francesco, A. Masci, J. Masojidek, M. Sugiura, A. Volpe and R. Pilloton	271
Recombinant horseradish peroxidase- and cytochrome <i>c</i> -based two-electrode system for detection of superoxide radicals	
S. Shipovskov, E.E. Ferapontova, I. Gazaryan and T. Ruzgas	277
Bi-enzyme sensor based on thick-film carbon electrode modified with electropolymerized tyramine	
E.V. Suprun, H.C. Budnikov, G.A. Evtugyn and Kh.Z. Brainina	281
Properties of mixed alkanethiol–dendrimer layers and their applications in biosensing	
L. Svobodová, M. Šnejdárková, K. Tóth, R.E. Gyucsanyi and T. Hianik	285
Amperometric detection of phenolic compounds by polypyrrole-based composite carbon paste electrodes	
P. Mailley, E.A. Cummings, S. Mailley, S. Cosnier, B.R. Eggins and E. McAdams	291
Biotinylated polypyrrole films: an easy electrochemical approach for the reagentless immobilization of bacteria on electrode surfaces	
S. Da Silva, L. Grosjean, N. Ternan, P. Mailley, T. Livache and S. Cosnier	297
Nucleosides and ODN electrochemical detection onto boron doped diamond electrodes	
E. Fortin, J. Chane-Tune, P. Mailley, S. Szunerits, B. Marcus, J.-P. Petit, M. Mermoux and E. Vieil	303
An electrochemical study of enzymatic oligonucleotide digestion	
S.C. Hillier, C.G. Frost, A.T.A. Jenkins, H.T. Braven, R.W. Keay, S.E. Flower and J.M. Clarkson	307

Electrochemical and Magnetic Field Processes

The effect of resting transmembrane voltage on cell electroporation: a numerical analysis	
B. Valič, M. Pavlin and D. Miklavčič	311
Electromagnetic field of extremely low frequency decreased adenylate kinase activity in retinal rod outer segment membranes	
S. Ravera, E. Repaci, A. Morelli, I.M. Pepe, R. Botter and D. Beruto	317
Excitation of vibrations in microtubules in living cells	
J. Pokorný	321
Osmotically induced membrane tension facilitates the triggering of living cell electroporation	
C. Barrau, J. Teissié and B. Gabriel	327
Evidence of electroconformational changes in membrane proteins: field-induced reductions in intra membrane nonlinear charge movement currents	
W. Chen	333
Comparison of the low-frequency magnetic field effects on bacteria <i>Escherichia coli</i> , <i>Leclercia adecarboxylata</i> and <i>Staphylococcus aureus</i>	
L. Fojt, L. Strašák, V. Vetterl and J. Šmarda	337
Pulse activity of populations of cortical neurons under microwave exposures of different intensity	
R.A. Chizhenkova	343

Biomedical and Biotechnological Applications

Electrochemical determination of lead and glutathione in a plant cell culture	
J. Vacek, J. Petřek, R. Kizek, L. Havel, B. Klejduš, L. Trnková and F. Jelen	347
Effect of the leaving group on the electrochemical reduction mechanism of anti- <i>Helicobacter pylori</i> metronidazole derivatives, in aprotic and protic media	
J.C.M. Cavalcanti, F.C. de Abreu, N.V. Oliveira, M.A.B.F. de Moura, J.G. Chaves, R.J. Alves, M. Bertinaria, R. Fruttero and M.O.F. Goulart	353

Thin film platinum cuff electrodes for neurostimulation: in vitro approach of safe neurostimulation parameters S. Mailley, M. Hyland, P. Mailley, J.A. McLaughlin and E.T. McAdams	359
Fluid flow electrophoresis model J.D. Hickey and R. Gilbert.	365
Enhancement of the effectiveness of electroporation-augmented cutaneous DNA vaccination by a particulate adjuvant L. Zhang, G. Widera and D. Rabussay.	369
Author Index to Volume 63	375
Subject Index to Volume 63	377
Contents of Volume 63	385

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. Please refer to the online version of the Guide for Authors at <http://www.elsevier.com/locate/bioelechem>