CONTENTS

Rearrangements of Housane Cation Radicals	
James B. Gerken, Alejandro Preciado, Young Sam Park, Dean J. Tantillo,	
and R. Daniel Little	1
and It Barnet Bittle	
Biomimetic Oxygenation using Electrochemical Method	
Shojiro Maki	5
Shojho Waki	3
Synthesis of 2,3-Dihydrobenzofuran Derivatives via Electron Transfer	
Reaction Catalyzed by Iron(III)-Salt in an Ionic Liquid Solvent System	
Toshiyuki Itoh, Hiroyuki Uehara, Kimio Kawai, Shuichi Hayase, Hiroyuki	0
Ohara, and Munetaka Oyama	9
Electrochemical Debalogenation Deaction of DDT Medicted by	
Electrochemical Dehalogenation Reaction of DDT Mediated by	
Hydrophobic Vitamin B ₁₂	12
Yoshio Hisaeda, Hisashi Shimakoshi, Mami Tokunaga, and Tatsushi Baba	13
Preliminary Mechanistic Study of the Electron Transfer Reduction of	
Sulfenic Acid Esters	
	17
D. L. B. Stringle and M. S. Workentin	17
Determination of the Formation Constant for Adduct Formation between	
Water and the Radical Anion of 3,5-di-tert-Butyl-1,2-benzoquinone	
Noriko Okumura and Dennis H. Evans	21
Notiko Okumura and Dennis II. Evans	21
Evidence for an Inverted Region Behavior in Proton Transfer to	
Carbanions. A Laser Flash Electron Photoinjection Study	
Claude P. Andrieux, Jean Gamby, Philippe Hapiot, and Jean-Michel Savéant	25
Claude 1. Andrieux, Jean Gamby, I imppe Hapiot, and Jean-Michel Saveant	23
Electron Transfer to and Conformational Preferences of Aib Oligo-Peptides	
Vincenzo Barone, Fernando Formaggio, Roberto Improta, Federico Polo, and	
Flavio Maran	29
Travio iviaran	29
Kinetics and Mechanism of the Formation of Organometallic Compounds	
from Organic Halides at Metal Surfaces	
Walter J. Bowyer and Barbara A. Beckingham	33
Watter J. Dowyer and Darbara At. Decknigham	33
Catalytic Reduction of 1,6-Dihaloalkanes with Electrogenerated Nickel(I)	
Salen in Dimethylformamide	
Parichatr Vanalabhpatana and Dennis G. Peters	37



Dissociative Electron Transfer to Organic Polychloride Pollutants. From Electrochemical Induced Cleavage to Enzymatic Dechlorination Juan Elias Argüello, Cyrille Costentin, Benoît Limoges, Marc Robert, and Jean-Michel Savéant	41
Linear and Cyclic Vinylogous TTF: Molecular Movement Induced by	
Electron Transfer	15
M. Guerro, R. Carlier, D. Lorcy, and P. Hapiot	45
Electrochemistry of Terephthalaldehyde	
P. Zuman, W. J. Bover, M.S. Baymak, and H. Celik	49
Towards Molecular-Level Understanding of Electrocatalytic	
Hydrogenation. Part 2. Behavior of Benzene at Pt(hkl)	
Martin DeBlois, Gregory Jerkiewicz, and Jean Lessard	53
The Effect of Surface Species on the Rate of H Sorption into	
Nanostructured Pd	
Phil N. Bartlett and Jan Marwan	57
Electrocatalytic Carbonylation of Methanol by Gold Anode	
Ichiro Yamanaka, Akiyasu Funakawa, Sakae Takenaka, and Kiyoshi Otsuka	61
Structure-Property Relationship of Substrates Modified with Aromatic	
Mercaptans	
Mark R. Anderson and Huimin Li	65
Enhanced Rates of Electrolytic Styrene Epoxidation Catalyzed by	
Myoglobin-Polyion Films in Bicontinuous Microemulsions	
James F. Rusling, Abhay Vaze, and Michael Parizo	69
Electrochemistry of Adsorbed Nitrofluorenone Monolayers and Their Use	
in Bioelectrocatalysis	
Samia Ben-Ali, Nicolas Mano, and Alexander Kuhn	73
Bio-Sensitization of Boron-Doped Diamond	
Didier Delabouglise, Bernadette Marcus, Michel Mermoux, Pierre Bouvier,	
Jean-Pierre Petit, Gregory Berthomé, Pascal Mailley, and Thierry Livache	77
Electrogenerated Affinity Polymers for the Immobilization of Biomolecules:	
from Microbiosensors to Bioreactors	
Serge Cosnier	81
Metal-Metal Bond Based Molecular Wires. Electrosynthesis, Spectroscopic	
Features and Catalytic Activities	
Sylvie Chardon-Noblat and Alain Deronzier	85

Synthesis and Characteristics of Polyacetylene Chloride Min-Hua Chen and Tse-Chuan Chou	89
Environmentally Benign Organic Syntheses by Utilizing Organic	
Electrochemistry	
Masao Tokuda	93
Cathodia Cualization of N (Ornallar) was idinium Salta A Shout Entern to	
Cathodic Cyclization of N-(Oxoalkyl)pyridinium Salts . A Short Entry to Indolizidines and Quinolizidines	
Jens Heimann and Hans J. Schäfer	97
Jens Heimann and Hans J. Schaler	"
On the Specific Use of Platinum Cathodes to Convert Primary Alkyl	
Halides to Alkenes	
Jacques Simonet and Dennis G. Peters	101
Intramolecular Hydrodimerization Reaction of Cyclic Enones	
Scott T. Handy and Duncan Omune	105
Electrolyzed CH ₃ CN-Et ₄ NClO ₄ Solutions: an Alternative Strategy to C-N	
Bond Formation	100
Leucio Rossi, Marta Feroci, Monica Orsini, Laura Palombi, and Achille Inesi	109
Electrocatalytic Hydrogenation of a Model alpha-Functionalized Carboxylic	
Acid in Aqueous Medium	
Tulika S. Dalavoy, James E. Jackson, Greg M. Swain, and Dennis J. Miller	113
Electroreductive One-pot Double Carboalkoxylation with N-	
Carboalkoxyimidazole	
Ikuzo Nishiguchi, Tetsuro Uchida, Utako Yamamoto, and Hirofumi Maekawa	117
Electrosynthesis of New Hydroxylamines – Stability and Evolution	
Cecilia Cristea, Claude Moinet, and Maria Jitaru	121
Anodic Electrochemistry and The Use of Electroauxiliaries for Post-	
Synthetically Modifying Peptides	105
Haizhou Sun and Kevin D. Moeller	125
Electrosynthesis of Dihydrobenzo[B]thiophene Derivatives Catalyzed by	
Nickel Complexes	
Jérémie Pelletier, Sandra Olivero, and Elisabet Duñach	129
Mediated Electrosynthesis	
Derek Pletcher	133

Unprecedented and Unique Electroreductive Rearrangement of	
4-(2-Nitrophenyl)-3,5-dicarboalkoxy-1,4-dihydropyridines to 3- Carboalkoxyquinolines	
Ikuzo Nishiguchi, Masashi Maseguchi, Masato Matsunami,	
Yoshimasa Yamamoto and Hirofumi Maekawa	137
Highly Selective Friedel-Crafts Reaction of Electrochemically Generated	
"Cation Pool" Using Micromixing Jun-ichi Yoshida, Aiichiro Nagaki, and Seiji Suga	141
Jun-lein Toshida, Alienno Nagaki, and Seiji Suga	141
Anodic Oxidation of Mono- and Disubstituted 1,4-Dimethoxybenzenes	
Cheng-Chu Zeng and James Y. Becker	145
Stereoselective Synthesis of Azasugars by Electrochemical Oxidation	
Yshihiro Matsumura, Osamu Onomura, and Noriaki Moriyama	149
Anodic Modification of Proline Residues of Peptides Using a Lithium Perchlorate / Nitromethane Electrolyte Solution	
Kazuhiro Chiba, Tomoyuki Suzuki, Fumiyoshi Tanaka, Yoshikazu Kitano, and	
Masahiro Tada	153
Masaimo Tada	100
Scope and Limitation of Electrochemical Phenolic Oxidation: Synthesis of	
Verbenachalcone	
Takamasa Tanabe, Fuminao Doi, Takahisa Ogamino, and Shigeru Nishiyama	157
Electro-oxidation of Alcohols in N-Oxyl-Immobilized Ionic Liquids -	
Approach to a Totally Closed System	
Manabu Kuroboshi, Junko Fujisawa, and Hideo Tanaka	161
Influence of the Acidity Level Change in Aprotic Media on the	
Voltammetric Behavior of Nitrogabacinamamides	165
José A. Bautista-Martínez, Ignacio González, and Martha Aguilar-Martínez	165
Experimental Proof of Formation of Imines as Intermediates in the	
Reduction of Hydrazones	
M.S. Baymak, H. Lund, and P. Zuman	169
Contributions to the Electroreduction of Oximes	
H. Celik, J. Ludvik, and P. Zuman	173
Kinetics of Anodic Oxidation of Sodium Gluconate by Using Graphite Electrode	
Chiu-Fong Chou and Tse-Chuan Chou	177
Cina Pong Choa and 150 Chaan Choa	177

The Influence of Hydrogen Bond Strength on the Redox Properties of	
Different α-NH-Quinones	
M. Aguilar-Martínez, N. A. Macías-Ruvalcaba, and I. González	181
Intra and Intermolecular Hydrogen Bonding	
in α-Phenolic-Naphtoquinones	
Martín Gómez, Ignacio González, and Felipe J. González	185
Molecular and Electronic Structural Properties of the Hydrogen-Bonded	
Complexes of p-Quinone and o-Quinone Dianions	
Noriko Okumura and Bunji Uno	189
North Okumura and Bunji Ono	109
Ab Initio Computation of Electron Affinities of Substituted	
Benzalacetophenones (Chalcones). A New Approach to Substituent Effects	193
in Organic Electrochemistry	
Latorya D. Hicks, Albert J. Fry, and Vanessa C. Kurzweil	
Electrochemical Studies and Semiempirical Calculations on π -Conjugated	
Dienones and Related Compounds	
S. Vatsadze, M. Al-Anber, R. Holze, W.R. Thiel, and H. Lang	197
Computational Studies of Decomposition Reactions of 1,4-Diphenyl-2,3-	
dioxabicyclo[2.2.2]octane Radical Cation Generated by Photoinduced	
Electron Transfer	
R. Akaba, Y. Kiyota, S. Nishimoto, and M. Kamata	201
7221	
Spectroscopic Study on the Reactivity of para-Substituted N,N-	
Dimethylaniline Derivative Cation Radicals in Acetonitrile	
Jingdong Zhang and Munetaka Oyama	205
Electrolytes for Lithium Batteries Based on Polysiloxane Hosts	
	209
Jay J. Jin and Leslie J. Lyons	209
The Effect of Room Temperature Molten Thiocyanate Salts in CuI on the	
Performance of Solid-State Dye-Sensitized Photovoltaic Cells using CuI as a	
Hole Collector	
Akinori Konno, Tatsuya Kitagawa, Daiji Sugiura, G. R. Asoka Kumara, and	
Kirthi Tennakone	213
Author Index	217
Subject Index	220