

TABLE OF CONTENTS

The Origin of Ideas on a Hydrogen Economy and its Solution to the Decay of the Environment	1
<i>J.O'M. Bockris, a guest author</i>	
Electro-Adsorbed Hydrogen and Hydrogen Electrocatalysis.....	25
<i>G. Jerkiewicz, a guest author</i>	
Fuel Cells, an Electrochemical solution to Global Climate Change in the 21st Century.....	40
<i>D. P. Wilkinson, a plenary symposium lecturer</i>	
Harvesting Energy from Natural Benthic Voltage Gradients.....	51
<i>L. M. Tender* and S. Fertig</i>	
Model Nanostructured Pt electrodes an Approach to Study Size/Structural Effects in Electrocatalysis.....	56
<i>O. V. Cherstiouk, P. A. Simonov, A. L. Chivilin and E. R. Savinova*</i>	
New Electrodes for Improved Oxidation of Hydrocarbons in High Temperature Fuel Cells.....	72
<i>John T. S. Irvine</i>	
Direct Carbon Conversion: Application to the Efficient Conversion of Fossil Fuels to Electricity	78
<i>J. F. Cooper*, N. Cherepy, G. Berry, A. Pasternak, T. Surles, and M. Steinberg</i>	
Spectroscopic and Electrochemical Strategies for Basic Research in Fuel Cell Catalysis.....	91
<i>A. Wieckowski*, H. Kim, C. Rice, and P. Waszczuk</i>	
Can Electrochemistry Be Useful in the War on Global Warming?.....	111
<i>Donald A. Tryk and Akira Fujishima, guest authors</i>	
Heterogeneous Photocatalysis and Global Climate Change: The Solar Photochemical Remediation Approach.....	126
<i>K. Rajeshwar</i>	
Modeling Challenges in Solar Photovoltaic Devices	135
<i>J. W. Halley</i>	
Carbon Management Strategies for the Electric Power Industry	149
<i>John Stringer</i>	

* invited speaker and corresponding author

A Biomimetic Route to Environmentally Friendly CO ₂ Sequestration: Catalyst Immobilization	162
<i>F. Arzum Simse-Ege, G. M. Bond, and J. Stringer*</i>	
Possible Effects of Climate Change on Atmospheric Corrosion of Metal In Infrastructure	171
<i>S. Cole, A. K. Neufeld* and D. Paterson</i>	
An Objective Approach to Identifying Factors Leading to Climatic Change	183
<i>E. D. Minor</i>	
Electrochemical Sensor for Dopamine Based on Prussian Blue Modified Electrode	196
<i>N. D. Totir, S. S. Lupu*, and E. M. Ungureanu</i>	
A Voltammetric Study of the Anode Effect in NaF-AlF ₃ -CaF ₂ -Al ₂ O ₃ Mixtures.....	207
<i>R. G. Haverkamp*, S. Rolseth, J. Thonstad, H. Gudbrandsen</i>	
Investigation of Chamber Cleaning Using PFC Remote Plasma	221
<i>E. Wani*, T. Sunada, S. Suzuki, Y. Kosano, Y. Mitsui, T. Takaichi, T. Beppu, and A. Sekiya</i>	
PE-CVD Chamber Cleaning Process Performance Observation Using Fluorocarbon Plasma Optical Emission.....	231
<i>S. Suzuki*, E. Wani, T. Sunada, K. Shibata, T. Morimura, Y. Mitsui, Y. Kosano, T. Takaichi, T. Beppu, and A. Sekiya</i>	
Investigation Regarding Inductive Coupled Plasma Abatement Unit for C ₂ F ₆ PECVD Cleaning Gas with Added Oxygen	242
<i>T. Sunada*, E. Wani, S. Suzuki, K. Shibata, Y. Kosano, Y. Mitsui, T. Takaichi, T. Beppu, and A. Sekiya</i>	
Through a Glass Dimly: A Look at Environmentally-Related Changes in the National Research Agenda and Their Impact on Solving Problems	254
<i>D. R. Baer</i>	
Author index	274
Index of keywords	276