

11th European Conference on High-Technology Plasma Processes 2010

(HTPP 11)

Journal of Physics: Conference Series Volume 275

**Brussels, Belgium
27 June – 2 July 2010**

**ISBN: 978-1-61782-312-1
ISSN: 1742-6588**

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2010) by the Institute of Physics
All rights reserved.

Printed by Curran Associates, Inc. (2011)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

CHARACTERISATION OF AN AR-H₂-O₂ ICP BY OES: MEASUREMENT OF THE ATOMIC CONCENTRATIONS OF H AND O	1
<i>J Altenberend, M Majchrzak, Y Delannoy, G Chichignoud</i>	
EXPERIMENTAL QUANTIFICATION OF THE TRANSIENT HEAT FLUX TRANSFERRED TO THE ELECTRODES IN A CARBON NANOTUBES SYNTHESIS REACTOR	9
<i>R Ramanantsoa, M Masquère, J J Gonzalez, P Freton, J Pacheco</i>	
LAST DEVELOPMENTS IN DIAGNOSTICS TO FOLLOW SPLATS FORMATION DURING PLASMA SPRAYING	18
<i>S Goutier, M Vardelle, P Fauchais</i>	
EXPERIMENTAL ASSESSMENT OF THE SURFACE TEMPERATURE OF COPPER ELECTRODES SUBMITTED TO AN ELECTRIC ARC IN AIR AT ATMOSPHERIC PRESSURE	28
<i>R Landfried, T Leblanc, R Andlauer, Ph Teste</i>	
PLASMA-ARC REACTOR FOR PRODUCTION POSSIBILITY OF POWDERED NANO-SIZE MATERIALS	38
<i>V Hadzhiyski, M Mihovsky, R Gavrilova</i>	
INVESTIGATION OF PARAMETERS OF THE THREE PHASE HIGH-VOLTAGE ALTERNATING CURRENT PLASMA GENERATOR WITH POWER UP TO 100 KW WORKING ON STEAM	47
<i>Ph G Rutberg, S A Lukyanov, A A Kiselev, S A Kushev, Gh V Nakonechny, A V Nikonov, S D Popov, E O Serba, V A Spodobin, A V Surov</i>	
THE ROLE OF RADIATION LOSSES IN HIGH-PRESSURE BLASTED ELECTRICAL ARCS	56
<i>J Gregor, I Jakubova, J Senk, A Maslani</i>	
PLASMA ARC CUTTING TECHNOLOGY: SIMULATION AND EXPERIMENTS	66
<i>G Cantoro, V Colombo, A Concetti, E Ghedini, P Sanibondi, F Zinzani, F Rotundo, S Dallavalle, M Vancini</i>	
MEAN ABSORPTION COEFFICIENTS OF AIR PLASMAS	76
<i>N Bogatyreva, M Bartlova, V Aubrecht</i>	
APPLICATION OF AQUEOUS DISPERSIONS OF SILVER NANOSTRUCTURES FOR TREATMENT OF PYOINFLAMMATORY DISEASES WITH A CHRONIC COMPONENT	86
<i>Ph Rutberg, V Kolikov, V Snetov, A Stogov, A Moshkin, M Khalilov</i>	
EFFECTS OF HYDROGEN ADDITION IN NITROGEN ATMOSPHERIC PRESSURE PLASMA ON ITS OPTICAL AND ELECTRICAL PROPERTIES AND SILICON-BASED DEPOSITS COMPOSITIONS	91
<i>D Debrabandere, X Vanden Eynde, F Reniers</i>	
INVESTIGATION OF THE GAS FLOW EFFECT ON AN ATMOSPHERIC PRESSURE RF PLASMA TORCH	97
<i>M Atanasova, D Mihailova, E Carbone, J Van Dijk, J J A M Van Der Mullen, E Benova, G Degrez</i>	
POST-DISCHARGE TREATMENT OF AIR EFFLUENTS POLLUTED BY BUTYL-MERCAPTAN: ROLE OF NITRATE RADICAL	104
<i>L Braci, S Ognier, Y N Liu, S Cavadias</i>	
DEVELOPMENT OF A HOLLOW CATHODE PLASMA SOURCE FOR MICROCRYSTALLINE SILICON THIN FILMS DEPOSITION	114
<i>P Dimitrakellis, E Amanatides, D Mataras, D E Rapakoulis</i>	
PLASMA GASIFICATION OF WASTE AS A METHOD OF ENERGY SAVING	122
<i>V E Popov, A N Bratsev, V A Kuznetsov, S V Shtengel, A A Ufimtsev</i>	
CO₂ VALORIZATION BY MEANS OF DIELECTRIC BARRIER DISCHARGE	130
<i>H Machrafî, S Cavadias, J Amouroux</i>	
COMPARISON OF LIBS AND μ-XRF MEASUREMENTS ON BRONZE ALLOYS FOR MONITORING PLASMA EFFECTS	140
<i>M F Alberghina, R Barraco, M Brai, T Schillaci, L Tranchina</i>	
INFLUENCE OF SUCCESSIVE PLASMA TREATMENTS ON PP FOILS	151
<i>T Jacobs, R Morent, N De Geyter, C Leys</i>	
TITANIUM OXIDE THIN FILM DEPOSITION BY PULSED ARC VACUUM PLASMA	159
<i>I S Zhirkov, C Paternoster, M P Delplancke-Ogletree</i>	
STYRENE AND METHYL METHACRYLATE COPOLYMER SYNTHESIZED BY RF INDUCTIVELY COUPLED PLASMA	168
<i>Z Li, X Gillon, M Diallo, L Houssiau, J-J Pireaux</i>	

PLASMA CHEMISTRY MODELING FOR AN INDUCTIVELY COUPLED PLASMA USED FOR THE GROWTH OF CARBON NANOTUBES	176
<i>M Mao, A Bogaerts</i>	
Author Index	