

Contents

Preface	7
Program	9
Invited Lectures	13
J. Vlček, P. Steidl, P. Calta, P. Zeman Pulsed Magnetron Deposition of High-Temperature Si-B-C-N Films	15
J. Vyskočil, A. Mašková Challenges for thin film applications in vehicle engines	17
H. Biederman, O. Polonskyi, M. Drábik, O. Kylián, A. Choukourov, P. Solař, A. Serov Nanostructured and nanocomposite films prepared by means of plasma polymers	21
T. Kubart Process modelling for reactive magnetron sputtering	25
V. Ondok, A. Hieke Ionbond and its PVD and PA-CVD Technology: Coatings for Automotive and Racing applications	29
J. Houška How advanced calculations support material research: modelling of structures and properties of novel functional materials	33
R. Daniel, C. Mitterer Concept for optimized coating design and architecture	37
M. Jílek, P. Vogl Influence of PVD process parameters on $Ti_{1-x}Al_xN$ coating structure prepared by a system with rotary arc cathodes	41
F. Regent Anti-reflective coatings used in production of eyeglasses	47
H. Hrubý, J. Anklam Eifeler PVD systems as a basis for research and industry	53

M. Kormunda, Z. Strýhal, J. Matoušek, J. Pavlík Tin oxide for use in sensors and catalytic applications	57
J. Martan Thin films thermal conductivity and specific heat measurement – pulsed photothermal radiometry system and applications	61
Oral Presentations	65
J. Blažek, R. Čerstvý, P. Stupka, J. Musil Effect of Cu content on structure and mechanical properties of sputtered Al-Cu-O films	67
R. Jílek, M. Meissner, J. Musil Reactive magnetron sputtering of Al-O-N thin films using reactive gas pulsing	69
T. Koranda, J. Rezek, J. Vlček High-Rate Reactive Deposition of Transparent Zirconium Dioxide Films Using High-Power Impulse Magnetron Sputtering	71
M. Netrvalová, J. Očenášek Identification of optical parameters of thin films from transmittance spectra	73
P. Novák, M. Netrvalová, P. Šutta, L. Prušáková Structure, surface morphology and optical properties of ZnO:Sc thin films	75
L. Prušáková, M. Netrvalová, V. Vavruňková, J. Müllerová, P. Šutta Change of optical properties of a-Si:H films in dependence on different material structure	77
V. Prysiazhnyi Influence of humidity on atmospheric pressure cold plasma treatment of metal surfaces	79
J. Sklenka, J. Musil Effect of target composition and partial pressure of oxygen on mechanical properties of magnetron sputtered Zr-Al-O films	81
P. Stupka, Š. Prokšová, R. Čerstvý, P. Zeman, J. Musil Magnetron Sputtering of Ti/Al Multilayer Coating Composed of Nano-bilayers ...	83

T. Svoboda, M. Dvořák, M. Klíma Plasma multijet system for atmospheric surface treatment	85
P. Zelina, V. Kudrle, O. Jašek Alternative method for flow measurement of clog producing gases and liquids in PVD and PECVD processes	87
M. Zouhar, Z. Navrátil, A. Buček, F. Peterka, P. Štáhel On examination of photocatalytic activity of rough surface symplex by means of two methods – MB degradation and WCA tests	89