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& 50th International Field Emission Symposium

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Technical Digest

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Field emission characteristics of polymethyl methacrylate polymer thin film

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A millimeter wave generator based on field emission cathode

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Nanodiamond lateral field emission triode

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Carbon nanotube lateral field emitters with integrated metallic anode

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Residual gas analysis based on CNT-FED
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A novel gun of RF power amplifier based on always-on cathode
Qilong Wang, Yunsong Di, Wei Lei, Xiaobing Zhang, Jinchan Wang, Hui Mu
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Characteristic and circuit model of a CNT-FED subpixel
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Simulation secondary electron emission of a hopped FED
Lifang Zhang, Xiaobing Zhang, Wei Lei, Xing Su, Chi Li
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The optimization on cathode profiles in screen printing CNT-FED
Yuning Zhang, Wei Lei, Xiaobing Zhang, Baoping Wang
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CNT-FED architecture based on a gate electrode of diabolo mode
Xiaxi Yang, Xiaobing Zhang, Zichen Zhang, Wei Lei, Jing Chen, Lifang Zhang
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Multipactor discharge in a dielectric-loaded accelerating structure
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Evaluation of a neon focused field ion source: fabrication and characteristics
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Effects of anode locations on the field electron emission from CNTs
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Preequilibrium thermofield microprotrusion as effective field point sources of electrons and ions
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The comparison between GaN thin film grown by femtosecond pulsed laser deposition and nanosecond pulsed laser deposition
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Field emission characteristics of ZnO nanowire and its application to luminescent tubes
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A Bayard-Alpert ionization gauge using carbon nanotube cold cathode
Huang J X, Jun Chen, S Z Deng, N S Xu
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PE144 A high brightness lighting element using carbon nanotube cathode
Yu Zhang, S.Z. Deng, Jun Chen, N.S. Xu
State Key Laboratory of Optoelectronic Material and Technology, Guangdong Province Key Laboratory of Display Material and Technology, and School of Physics and Engineering, Sun Yat-Sen University, China

PE145 Cathodoluminescent properties of SrGa2S4:Eu2+ phosphor for field emission display
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PE146 Welding of single tungsten oxide nanotips on tungsten microtips and their application as a field electron emitter
S An, J C She, S Z Deng, J Chen and N S Xu
State Key Laboratory of Optoelectronic Material and Technology, Guangdong Province Key Laboratory of Display Material and Technology, and School of Physics and Engineering, Sun Yat-Sen University, China

PE147 Study of application penetrating surface method in SEM to detect IC with insulator layer Si3N4+ SiOx
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PE148 Study on the internal damage of semiconductor devices and external damage of insulator layers
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PE149 Enhanced charge carriers injection by using high-doped silicon in organic-inorganic light-emitting diodes
Shengyi Yang, Xiulong Zhang, Zhidong Lou, Feng Teng, Zheng Xu, Yanbing Hou
Key Laboratory of Luminescence and Optical Information Technology, Ministry of Education, Institute of Optoelectronic Technology, Beijing Jiaotong University, China

PE150 Controlling growth of aligned carbon nanotube bundles arrays with microwave plasma CVD
J B Liu, S Z Deng N S Xu Jun Chen, Y L Ke
State Key Laboratory of Optoelectronic Material and Technology, Guangdong Province Key Laboratory of Display Material and Technology, and School of Physics and Engineering, Sun Yat-Sen University, China

PE151 Effect of growth environment on carbon nanotubes film
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State Key Laboratory of Optoelectronic Material and Technology, Guangdong Province Key Laboratory of Display Material and Technology, and School of Physics and Engineering, Sun Yat-Sen University, China
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PA01  Instrumentation developments in atom probe tomography  
Joseph H. Bunton, Daniel Lenz, Jesse D. Olson, Keith Thompson, Rob Ulfig, David Larson, Ed Oltman, Tom Kelly
Imago Scientific Instruments, Corp. USA

PA02  Atom probe tomography characterization of a gas atomized metallic glass  
M.K. Miller¹, S. Venkataraman², J. Ecker², L. Schultz³, D. Sordelet¹²³
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PA03  3D characterization of the carbon distribution in a medium carbon steel  
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PA04  Failure analysis of local electrodes  
K.F. Russell and M.K. Miller
Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, USA

PA05  Nanoclustering in a MA/ODS ferritic alloy  
M.K. Miller, C.L. Fu, C.T. Liu, D.T. Hoelzer and K.F. Russell
Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, USA

PA06  Clustering and precipitation in neutron irradiated low copper and copper-free steels and model alloys  
M.K. Miller¹, K.F. Russell¹, and G.R. Odette²
¹Materials Science and Technology Division, Oak Ridge National Laboratory, USA
²Department of Mechanical Engineering, University of California – Santa Barbara, USA

PA07  Interfacial partitioning in single crystal Ru-bearing superalloys  
M.K. Miller, K.F. Russell and S. Tin
Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge
Mechanical, Materials and Aerospace Department, Illinois Institute of Technology, Chicago, USA

PA08  A study of the anomalous field evaporation of Sm(Co₀.₆₆Fe₀.₂₀Cu₀.₁₀Zr₀.₀₂)ₓₐ₇.₅ alloy by 3D-atom probe  
X.Y. Xiong¹ and T.R. Finlayson²
¹Department of Materials Engineering, Monash University, Australia.
²School of Physics, Monash University, Australia.

PA09  Microstructural evolution of a newly developed γ' strengthened Co-base superalloy  
D. H. Ping, C. Y. Cui, Y. F. Gu, H. Harada
National Institute for Materials Science, Japan

PA10  Field evaporation: different view  
Dinko N. Zurlev
Str. ISKAR, Bulgaria

PA11  Atom probe field ion microscopy and high resolution electron microscopy: two complementary methods for atomic scale characterisation  
F. Danoix¹, T. Gloriant², T. Epiciér F. Vurpillot¹, W Lefebvre¹
PA12 Standard deviation of composition measurements in atom probe analysis
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PA13 Trace element Sn segregation in Cu-rich precipitates during thermal ageing of pressure vessel steels
G. Sha1, A. Morley1, A. Cerezo1, G. D. W. Smith1, D. Ellis2 and T. Williams3
1Department of Materials, University of Oxford, UK
2Rolls-Royce plc., UK
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PA14 Characterization of segregation and precipitation at grain boundaries in thermally aged pressure vessel steels
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3Rolls-Royce plc., UK
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PA15 Smoother shank profile for atom probe specimens prepared by the multi-step focused ion beam milling
S. Pinitsoontorn, A. Cerezo, A. K. Petford-Long
Department of Materials, University of Oxford, UK
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PA16 Why do we need a high performance position sensitive detector in Atom probe Tomography?
F. Vurpillot, G. Da Costa, F. De Geuser, B. Gault and B. Deconihout
Groupe de Physique des Matériaux, UMR 6634 CNRS – Université de Rouen, France
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PA17 3D atomic characterization by using field ion computed tomography
F. Vurpillot, F. Danoix, W. Lefebvre, B. Radiguet and B. Deconihout
Groupe de Physique des Matériaux, Université de Rouen, France
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PA18 Study of copper effect on the early stage of precipitation in Al-Mg-Si-Cu alloys
O. Cojocaru1, W. Lefebvre1, C. D. Mariaoa2, H. K. Hasting2, J. Walmsley3, F. Danoix1
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2Department of Physics, University of Trondheim, Norway
3SINTEF Materials and Chemistry, Norway
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PA19 Laser atom probe tomography: application to polymers
T. J. Prosa, S. L. P. Kostrna and T. F. Kelly
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PA20 Atom probe data reconstruction, visualization and analysis with the imago visualization and analysis system (IVAS)
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PA21 Advances in specimen preparation for atom probe tomography
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Patrick Stender and Guido Schmitz
Institute of material physics, Westf. Wilhelms-Universität Münster, Germany
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PA23 Investigation of the site occupation of atoms in pure and doped TiAl/Ti3Al intermetallic
Torben Boll1, Talaat Al-Kassab1, Yong Yuan2, and Zhi-Quo Liu3
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PA24  Study of phase separation in Zr$_{23}$Co$_{33.5}$Al$_{33.5}$ bulk amorphous alloy by atom probe tomography
Ahmed Sharig, Talaat Al-Kassab, Reiner Kirchheim
Institut für Materialphysik, Germany

PA25  Extraction of experimental ZERO-Q evaporation field values
Richard G. Forbes
University of Surrey, Advanced Technology Institute (BB)
School of Electronics and Physical Sciences, UK

PA26  GaBi liquid metal alloy ion source for the production of ions of interest in microelectronics research
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PA27  Solute distribution in nanocrystalline Ni-W alloys
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PA28  A transmission electron microscope and atom-probe tomographic study of the microstructure of a Ni-Mo based “Hastelloy” alloy after 10 MeV electron irradiation
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PA29  Role of strain-compensated clusters in Al-alloy design
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PA30  Influence of emitter temperature and ionization potentials of emitter atoms on charge of evaporated ions
Golubev O.L. and Loginov M.V.
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PA31  High temperature field evaporation of tantalum emitter
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