

Thermal Barrier Coatings IV

Poster List

(May 12th, 2014)

- 1. Nondestructive evaluation of thermal barriers by laser thermal wave methods**
Alexey Glazov, A.F.Ioffe Physical Technical Institute, Russia
- 2. Fundamentals and advanced applications of electrophoretic deposition (EPD)**
Partha Sarkar, Alberta Innovates - Technology Futures, Canada
- 3. Thermal barrier coatings by EB-PVD for the aviation industry**
Stefan Kunkel, ALD Vacuum Technologies GmbH, Germany
- 4. Development of thermal barrier coatings by laser cladding of TiAl intermetallic alloy on Ti_6Al_4V**
Bernabe Carcel, Asociacion Industrial de Optica Color e Imagen AIDO, Spain
- 5. Development of thermal barrier coatings (TBCs) for gamma-TiAl with improved interface stability**
Yuxian Cheng, AVIC Shenyang Liming Aero-Engine (Group) Corporation Ltd, China
- 6. Deposition of NiCoCrAlY coatings by plasma activated EB-PVD using dual crucible technology**
Liu Zhu, Beihang University, China
- 7. Studies of high-temperature interactions between CMAS and TBCs: In situ Raman, optical basicity considerations, and mitigation strategies**
Hector F. Garces, Brown University, USA
- 8. Degradation and delamination of TBCs exposed to fly-ash CMAS in gas-turbine engines and its mitigation**
Amanda R. Krause, Brown University, USA
- 9. The effects of microstructure and thin alumina layer on the thermal cycling life for 7YSZ TBCs with CMAS deposits**
Qing He, Chinese Academy of Agricultural Mechanization Sciences, China
- 10. Design of an active diffusion barrier for TiAl alloy and Ni-based single-crystal superalloy**
Wen Wang, Chinese Academy of Sciences, China
- 11. High temperature oxidation and hot corrosion behavior of a glass-ceramic coating on a Ti-47AL-2CR-2NB alloy**
Shenglong Zhu, Chinese Academy of Sciences, China
- 12. Damage evolution of APS-TBC systems with laser structured and sand blasted ferralloy substrates**
Mario Schweda, Forschungszentrum Jülich GmbH, Germany
- 13. Interdiffusion between vacuum plasma-sprayed protective bond coats and γ -strengthened cobalt-base superalloys during thermal treatment**
Philipp J. Terberger, Forschungszentrum Jülich GmbH, Germany
- 14. Plasma-based tools for activated EB-PVD of TBC systems**
Burkhard Zimmermann, Fraunhofer Institute for Electron Beam and Plasma Technology, Germany

15. **Reactively co-sputtered alumina-stabilized zirconia – a base layer for EBPVD-TBC?**
Heidrun Klostermann, Fraunhofer Institute for Electron Beam and Plasma Technology, Germany
16. **Understanding the presence of CaSO₄ within CMAS and its effect on the infiltration behaviour in EB-PVD 7YSZ**
Ravisankar Naraparaju, German Aerospace Center (DLR), Germany
17. **Heat transfer process parameter optimization in silicides using TAGUCHI method**
V. L. N. Ranga Charyulu E, Gethanjali College of Engineering and Technology, India
18. **High temperature oxidation study (Thermogravimetric study) of plasma sprayed yttria stabilized zirconia thermal barrier coating**
Deepak Manwatkar, Godavari College of Engineering Jalgaon, India
19. **The effect of zirconia concentration on the M' structure and the M'-M transformation in yttrium tantalate**
Mary Gurak, Harvard University, USA
20. **Oxydation dynamics in APS and HVOF deposited AMDRY997 alloys**
Aurel-Mihai Vlaicu, I. N. C. D. Fizica Materialelor, Romania
21. **Mechanism of molten salt attack on zirconia based thermal barrier materials**
Ashutosh S. Gandhi, Indian Institute of Technology Madras, India
22. **Synthesis and thermophysical properties of La₂Zr₂O₇/SrZrO₃ composite as a new thermal barrier coating material**
Wen Ma, Inner Mongolia University of Technology, China
23. **Microstructure control of new generation SOL-GEL thermal barrier coatings: Formulation and processing**
Fabien Blas, Institut Carnot CIRIMAT, France
24. **Palladium and platinum modified aluminide bond coatings for EB-PVD TBCs**
Radosław Swadźba, Institute for Ferrous Metallurgy, Poland
25. **Influence of TBC coating on fatigue performance in resonance bending**
Radek Musalek, Institute of Plasma Physics AS CR, v.v.i., Czech Republic
26. **Application and characterization of a platinum modified aluminide-APS thermal barrier coating system**
Kourosh Shirvani, Iranian Research Organization for Science and Technology, Iran
27. **Thermal cycling life of thermal barrier coatings prepared by plasma spraying with dry-ice blasting**
Shujuan Dong, IRTES-LERMPS, Université de Technologie de Belfort-Montbéliard, France
28. **Oxidation and rumpling quantitative study on AM1/NiPtAl/7YPSZ EB-PVD TBC system**
Martine Poulain, Onera, France
29. **Asymptotic mathematical model of active thermal protection system**
Oleksii Zlobin, Politechnika Krakowska im. Tadeusza Kościuszki, Poland
30. **Calculation of thermal properties of composite materials**
Oleksii Zlobin, Politechnika Krakowska im. Tadeusza Kościuszki, Poland

31. **High temperature protective coatings of gas turbines**
Tural Usubaliyev, Silk Way Technics, Azerbaijan
32. **Process property relationships for plasma sprayed gadolinium zirconate**
Vaishak Viswanathan, Stony Brook University, USA
33. **Development of high entropy alloy bond coat compositions for thermal barrier coating systems**
Todd M. Butler, The University of Alabama, USA
34. **Long term degradation behavior of $\text{La}_2\text{Zr}_2\text{O}_7\text{-Yb}_2\text{Zr}_2\text{O}_7$ thermal barrier coatings**
Xiaorui Ren, Tsinghua University, China
35. **Thermophysical properties of simultaneous substituted pyrochlore solid solutions $(\text{Gd}_2\text{Zr}_2\text{O}_7)_{1-x}(\text{Ca}_2\text{Nb}_2\text{O}_7)_x$**
Meng Zhao, Tsinghua University, China
36. **Influence of thin PVD inter-layers on the durability of high temperature coating systems**
Ibrahim Ali, TU-Chemnitz, Germany
37. **Evolution of thermal barrier coating systems during isothermal oxidation at 1100°C: Kinetic and crystalline structure study**
Luis Alberto Cáceres Díaz, Unidad Querétaro, Mexico
38. **Influence of ball milling time and sintering temperature for preparation of new thermal barrier materials— $\text{LaTi}_2\text{Al}_9\text{O}_{19}$**
Peng Zhang, University College London, United Kingdom
39. **Hot corrosion of shipboard turbine components in a low velocity burner rig using alternative fuels**
Timothy Montalbano, University of California, Irvine, USA
40. **Elucidation of the yttria-tantala-zirconia phase diagram**
Chandra A. Macauley, University of California, Santa Barbara, USA
41. **Explicit-DEM modeling of failure in thermal barrier coatings**
John W. Pro, University of California, Santa Barbara, USA
42. **A new technique for measuring TGO interfacial toughness**
David J. Jorgensen, University of California, Santa Barbara, USA
43. **Bond coat cavitation under CMAS-infiltrated thermal barrier coatings**
Kaylan M. Wessels, University of California, Santa Barbara, USA
44. **Rare earth efficacy for CMAS mitigation in T/EBC systems**
David L. Poerschke, University of California, Santa Barbara, USA
45. **The influence of the composition of single crystalline NiAl and bond coats on fracture toughness, hardness and Young's modulus**
Ralf Webler, University of Erlangen-Nürnberg, Germany
46. **Effects of bond coat and substrate on interfacial adhesion and failure of TBCs**
Ping Xiao, University of Manchester, United Kingdom

47. **The study on the influence of the ceramic layer thickness ratio upon the stress in double-ceramic-layer thermal barrier coatings**
Meng Han, University of Science and Technology Beijing, China
48. **On the oxidation behaviour of Al-Cr-Si base bond-coat type alloys**
Amir Nanpazi, University of Sheffield, United Kingdom
49. **Low thermal conductivity TBCs with large lamellar pores prepared by plasma-cospraying of soid powder and suspension**
Guan-Jun Yang, Xi'an Jiaotong University, China
50. **Influence of particle size on composition and properties of La₂Ce₂O₇ splats and coatings deposited by plasma spraying**
Chang-Jiu Li, Xi'an Jiaotong University, China
51. **Evolution of microstructure and properties of plasma sprayed ysz coating attached to substrate during thermal cycling**
Guang-Rong Li, Xi'an Jiaotong University, China
52. **The detection of failure process in thermal barrier coatings based on acoustic emission testing**
Li Yang, Xiangtan University, China
53. **Determination of interfacial adhesion energies of thermal barrier coatings by compression test and cohesive zone finite element method**
Wang Zhu, Xiangtan University, China
54. **Oxidation analysis of thermal barrier coatings based on the large deformation theory**
Qiang Shen, Xiangtan University, China