Bruce A. Pint

Group Leader
Corrosion Science & Technology Group
Materials Science & Technology Division
Oak Ridge National Laboratory
P.O. Box 2008
Oak Ridge, TN 37831-6116
Phone: (865) 576-2897
Fax: (865) 241-0215
email: pintba@ornl.gov

Research Interest:

Research, development and characterization of corrosion-resistant, high-temperature materials for power generation applications.

Education:

- Ph.D., Ceramics, Materials Science and Engineering Department, Massachusetts Institute of Technology, 1992
- S.B., Materials Science and Engineering, Massachusetts Institute of Technology, 1988

Experience:

- January 1997- present - Research Staff, Corrosion Science & Technology Group, Metals & Ceramics Division, Oak Ridge National Laboratory
- February 1994 - January 1997 - Department of Energy Distinguished Postdoctoral Research Program, Oak Ridge National Laboratory
- June 1992 - January 1994 - Post-doctoral research, Massachusetts Institute of Technology
- September 1989 - December 1990 - Teaching assistant for undergraduate materials laboratory, Massachusetts Institute of Technology
- Summer 1986 and 1987, January 1988 - The Timken Company Canton, OH

Professional Societies:

- American Society for Metals (ASM) International
- The Electrochemical Society
- Materials Research Society
- American Ceramic Society
- American Society for Testing of Materials

Publications:

1. Y. Yamamoto, M. P. Brady, Z. P. Lu, C. T. Liu, M. Takeyama, P. J. Maziasz and B. A. Pint, (2007) “Alumina-Forming Austenitic Stainless Steels Strengthened by LAves Phase and MC Carbide Precipitates,” *Metallurgical and Materials Transactions*., v. 38A, p. 2737-2746.
2. B. A. Pint, S. J. Pawel, M. Howell, J. L. Moser, G. W. Garner, M. L. Santella, P. F. Tortorelli, F. W. Wiffen and J. R. DiStefano, “Initial Characterization of V-4Cr-4Ti and MHD Coatings Exposed to Flowing Li,” *Journal of Nuclear Materials .*
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4. B. A. Pint, “Overview of Coating and Compatibility Research For Fusion Energy in the United States,” *Materials Science Forum*.
5. B. A. Pint, W. D. Porter and I. G. Wright, “The Effect of Thermal Expansion on Spallation Behavior of Fe-Base Alumina-Forming Alloys,” *Materials Science Forum*.
6. Y. Zhang, B. A. Pint, K. M. Cooley and J. A. Haynes, “Formation of Aluminide Coatings on Fe-based Alloys by Chemical Vapor Deposition,”*Surface and Coatings Technology*.
7. B. A. Pint and K. L. More, (2008) “Transformation of Al2O3 to LiAlO2 in Pb-17Li at 800°C,” *Journal of Nuclear Materials,*.
8. B. A. Pint, Y. Zhang, S. Dryepondt, L. R. Walker and I. G. Wright, (2007) "Long-Term Performance of Aluminide Coatings on Fe-Base Alloys," Proc. Thirteenth Annual Conf. Fossil Energy Materials, R. R. Judkins (comp.) U. S. Department of Energy.
9. M. P. Brady, Y. Yamamoto, M.L. Santella, and B.A. Pint, (2007) “Effects of Minor Alloy Additions and Oxidation Temperature on Protective Alumina Scale Formation in Creep-Resistant Austenitic Stainless Steels,” *Scripta Materialia*, v. 57, p. 1117-20.
10. B. A. Pint, (2008) “Design Strategies for New Oxidation-Resistant High Temperature Alloys,” in W. Gao (ed.), “New Development in High Temperature Corrosion and Protection of Materials,” Woodhead, Cambridge, UK,.
11. J. P. Stacy, Y. Zhang, B. A. Pint, J. A. Haynes, B. T. Hazel and B. A. Nagaraj, (2007), “Synthesis and Oxidation Performance of Al-Enriched g+g’ Coatings on Ni-Based Superalloys Via Secondary Aluminizing,” *Surface and Coatings Technology*, v. 202, p. 632-636.
12. J. A. Haynes, B. A. Pint, Y. Zhang and I. G. Wright, (2007), “Comparison of the Cyclic Oxidation Behavior of b-NiAl, b-NiPtAl and g+g’ NiPtAl Coatings on Various Superalloys,” *Surface and Coatings Technology*, v. 202, p. 730-734.
13. B. A. Pint, Y. Zhang, L. R. Walker and I. G. Wright, (2007) “Long-Term Performance of Aluminide Coatings on Fe-Base Alloys,” *Surface and Coatings Technology*, v. 202, p. 637-642.
14. S. Dryepondt and B. A. Pint, (2008) “Effect of Substrate Mechanical Properties on Alumina Scale Morphology,” *Materials Science and Engineering*.
15. Y. Yamamoto, M. P. Brady, Z. P. Lu, P. J. Maziasz, C. T. Liu, B. A. Pint, K. L. More, H. M. Meyer and E. A. Payzant, (2007) “Creep-Resistant, Al2O3-Forming Austenitic Stainless Steels,” *Science*, v. 316, p. 433-436.

16. B. A. Pint, (2007) “Compatibility Issues For a High Temperature Dual Coolant Blanket,” *Fusion Science and Technology*, v. 52, p. 829-833.
17. Y. Zhang, Y. Q. Wang and B. A. Pint, (2007) “Evaluation of Iron Aluminide Coatings for Oxidation Protection in Water Vapor Environment,” NACE Paper 07-468, Houston, TX, presented at NACE Corrosion 2007, Nashville, TN, March 2007.
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19. B. A. Pint, J. P. Shingledecker, M. P. Brady and P. J. Maziasz, (2007) “Alumina-Forming Austenitic Alloys for Advanced Recuperators,” ASME Paper #GT2007-27916, presented at the International Gas Turbine & Aeroengine Congress & Exhibition, Montreal, Canada, May 14-17, 2007.
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21. B. A. Pint, K. L. More and I. G. Wright, “The Oxidation Behavior of Low Al Ni-Pt-Al Cast Alloys,” *Oxidation of Metals*.
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23. B. A. Pint, Y. Zhang, J. A. Haynes and I. G. Wright, (2006) "Extended Alloy Lifetimes Through Improved Coating Performance and Reactive Element Optimization," Proc. Twentieth Annual Conf. Fossil Energy Materials, R. R. Judkins (comp.) U. S. Department of Energy.
24. E. E. Bloom, J. T. Busby, C. E. Duty, P. J. Maziasz, T. E. McGreevy, B. E. Nelson, B. A. Pint, P. F. Tortorelli, and S. J. Zinkle, (2007) “Critical Questions in Materials Science and Engineering for Successful Development of Fusion Power,” *Journal of Nuclear Materials*, v. 367-370, p. 1-10.
25. P. J. Maziasz, B. A. Pint, J. P. Shingledecker, N. D. Evans, Y. Yamamoto, K. L. More and E. LaraCurzio, (2007) “Advanced Alloys for Compact, High-Efficiency, High-Temperature Heat-Exchangers,” *International Journal of Hydrogen Energy*, v. 32, p. 3622 3630.
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27. B. A. Pint, (2006) "Stainless Steels with Improved Oxidation Resistance for Recuperators," *Journal of Engineering for Gas Turbines and Power*, v. 128, p. 370-376.
28. Y. Zhang, D. A. Ballard, J. P. Stacy, B. A. Pint and J. A. Haynes, (2006) “Synthesis and Oxidation Behavior of Platinum-Enriched g+g’ Bond Coatings on Ni-Base Superalloys,” *Surface and Coatings Technology*. v. 201, p. 3857-3861.
29. S. Dryepondt, Y. Zhang and B. A. Pint, (2006) “Creep and Corrosion Testing of Aluminide Coatings on Ferritic Substrates,” *Surface and Coatings Technology*. v. 201, p. 3880-3884.
30. B. A. Pint, J. A. Haynes, Y. Zhang, K. L. More and I. G. Wright, (2006) “The Effect of Water Vapor on the Oxidation Behavior of Ni-Pt-Al Coatings and Alloys,” *Surface and Coatings Technology.* v. 201, p. 3852-3856.

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33. T. Muroga, J. M. Chen, V. M. Chernov, K. Fukumoto, D. T. Hoelzer, R. J. Kurtz, T. Nagasaka, B. A. Pint, M. Satou, A. Suzuki and H. Watanabe, (2007) “Advances in Development of Vanadium Alloys and MHD Insulator Coatings,” *Journal of Nuclear Materials*, v. 367-370, p. 780-787.
34. B. A. Pint, J. L. Moser, A. Jankowski and J. Hayes, (2007) “Compatibility of Multi-Layer, Electrically Insulating Coatings For the Vanadium-Lithium Blanket,” *Journal of Nuclear Materials*, v. 367-370, p. 1165-1169.
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41. B. A. Pint, Y. Zhang, J. A. Haynes and I. G. Wright, (2005) "Extended Alloy Lifetimes Through Improved Coating Performance and Reactive Element Optimization," Proc. Nineteenth Annual Conf. Fossil Energy Materials, R. R. Judkins (comp.) U. S. Department of Energy.
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43. D. J. Young and B. A. Pint, (2006) “Chromium Volatilization Rates from Cr2O3 Scales Into Flowing Gases Containing Water Vapor,” *Oxidation of Metals*, v. 66, p. 137-153.
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45. Y. Zhang, B. A. Pint, J. A. Haynes and I. G. Wright, (2005) "A Platinum-Enriched g+g' Two-Phase Bond Coat on Ni-Base Superalloys," *Surface and Coatings Technology*, v. 200, p. 1259-1263.
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54. B. A. Pint and P. J Maziasz, (2005) "Development of High Creep Strength and Corrosion-Resistant Stainless Steels," NACE Paper 05-449, Houston, TX, presented at NACE Corrosion 2005, Houston, TX, April 2005.
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57. B. A. Pint, Y. Zhang, J. A. Haynes and I. G. Wright, (2004) "High Temperature Oxidation Performance of Aluminide Coatings," Proc. Eighteenth Annual Conf. Fossil Energy Materials, R. R. Judkins (comp.) U. S. Department of Energy.

58. P. J. Maziasz, B. A. Pint, J. P. Shingledecker, K. L. More, N. D. Evans and E. Lara-Curzio, (2004) “Austenitic Stainless Steels and Alloys with Improved High-Temperature Performance for Advanced Microturbine Recuperators,” ASME Paper #GT2004-54239, presented at International Gas Turbine & Aeroengine Congress & Exhibition, Vienna, Austria, June 14-17, 2004.
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