

EXTERNAL PUBLICATIONS ON IODINE

In Refereed Journals:

1. J.M. Ball, J.C. Wren, and J.R. Mitchell, "The Dissolution of Solvents from Amerlock 400 Epoxy Paint", accepted for publication, *Can. J. Chem.* (2003).
2. G.A. Glowa and J.C. Wren, "Aqueous-Gas Phase Partitioning and Hydrolysis of Organic Iodides", *Can. J. Chem.*, 81, 230-243 (2003)
3. J.M. Ball and J.B. Hnatiw, "The Reduction of I_2 by H_2O_2 in Aqueous Solution," *Can. J. Chem.*, 79, 1 (2001).
4. J. McFarlane, J.C. Wren and R.J. Lemire, "Chemical Speciation of Iodine Source Term to Containment," *Nucl. Tech.*, 138, 162 (2002).
5. J.C. Wren and J.M. Ball, "LIRIC 3.2 An Updated Model for Iodine Behaviour in the Presence of Organic Impurities," *Rad. Phys. Chem.*, 60, 577 (2001).
6. J.C. Wren and G.A. Glowa, "Kinetic of Gaseous Iodine Uptake Onto Stainless Steel During Iodine-Assisted Corrosion," *Nucl. Tech.*, 133, 33 (2001).
7. J.C. Wren and G.A. Glowa, "A Simplified Kinetic Model for the Degradation of 2-Butanone in Aerated Aqueous Solutions under Steady-State Gamma-Radiolysis," *Rad. Phys. Chem.*, 58, 341 (2000).
8. J.C. Wren, D.J. Jobe, G.G. Sanipelli and J.M. Ball, "Dissolution of Organic Solvents from Painted Surfaces into Water", *Can. J. Chem.* 78, 464 (2000).
9. J.C. Wren, J.M. Ball and G.A. Glowa, "The Chemistry of Iodine in Containment", *Nucl. Tech.*, 129, 297 (2000).
10. G. Glowa, P. Driver and J.C. Wren, "Irradiation of MEK Part II: A Detailed Kinetic Model for the Degradation of 2-Butanone in Aerated Aqueous Solutions under Steady-State γ -Radiolysis Conditions", *Rad. Phys. Chem.*, 58, 49, (2000).
11. P. Driver, G. Glowa and J.C. Wren, "Steady-State γ -Radiolysis of Aqueous 2-Butanone", *Rad. Phys. Chem.* 57, 37 (2000).
12. J.C. Wren, G.A. Glowa and J. Merritt, "Corrosion of Stainless Steel by Gaseous Iodine", *J. Nucl. Material*, 265, 161 (1999).
13. J.C. Wren, J.M. Ball and G. Glowa, "The Interaction of Iodine with Organic Material in Containment", *Nucl. Tech.*, 125, 337 (1999).
14. J.C. Wren, J. Paquette, S. Sunder and B.L. Ford, "Iodine Chemistry in the +1 Oxidation State. II. A Raman and uv-visible spectroscopic study of the disproportionation of hypoiodite in basic solutions", *Can. J. Chem.*, 61, 2284 (1986).
15. S. Sunder, J.C. Wren and A.C. Vikis, "Raman Spectra of I_4O_9 Formed by the Reaction of Iodine with Ozone", *J. Raman Spec.*, 16, 424 (1985).
16. Vikis, A.C. and R. MacFarlane, "Reaction of Iodine with Ozone in the Gas Phase," *J. Phys. Chem.*, 89, 812 (1985).
17. J. Paquette, D.F. Torgerson, J.C. Wren and D.J. Wren, "Volatility of Fission Products During Reactor Accidents", *J. Nucl. Mater.*, 130, 129 (1985).
18. Paquette, J., Ford, B.L., "Iodine Chemistry in the +1 Oxidation State I. The Electronic Spectra of OI , HOI and H_2OI^+ ", *Canadian Journal of Chemistry*, 63, 2444, (1985).

19. F. Garisto, "Ideal Gas Thermodynamic Properties of HOI," *Thermodynamica Acta*, **63**, 251 (1983).

Conference Proceedings

20. J.C. Wren, G.A. Glowa and J.M. Ball, "IMOD, A Containment Iodine behaviour Model: Model Description and Simulation of RTF Tests", in Proceedings of Severe Accident Symposium, Korean Nuclear Society Conference, KAERI, October 26-27 (2000).
21. J.C. Wren, G.A. Glowa and J.M. Ball, "Summary of PHEBUS RTF Programme", in Proceedings of the 4th PHEBUS Seminar, Marseille, France, March 22, (2000).
22. J.C. Wren, G. Glowa and J.M. Ball, "A Simplified Iodine Chemistry and Transportation Model: Model Description and Some Validation Calculations", in Proceedings of OECD Workshop on Iodine Aspects of Severe Accident Management Vantaa, Finland, May 18-20, 1999, NEA/CSNI/R(99)7, pp. 327 - 341, Committee on the Safety of Nuclear Installations/Organization for Economic Cooperation and Development (1999).
23. J.C. Wren, J.M. Ball and G. Glowa, "Studies on the Effects of Organic-Painted Surfaces on pH and Organic Iodide Formation", in Proceedings of OECD Workshop on Iodine Aspects of Severe Accident Management, Vantaa, Finland, May 18-20, 1999, NEA/CSNI/R(99)7, pp. 181 - 196, Committee on the Safety of Nuclear Installations/Organization for Economic Cooperation and Development (1999).
24. J.M. Ball, et al., "International Standard Problem (ISP) No. 41: Computer Code Comparison Exercise Based on a Radioiodine Test Facility (RTF) Experiment on Iodine Behaviour in Containment under Severe Accident Conditions", in Proceedings of OECD Workshop on Iodine Aspects of Severe Accident Management, Vantaa, Finland, May 18-20, 1999, NEA/CSNI/R(99)7, pp. 311 - 325, Committee on the Safety of Nuclear Installations/Organization for Economic Cooperation and Development (1999).
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26. J.C. Wren, C.J. Moore, M.T. Rasmussen and K.R. Weaver, "A Model to Simulate the Removal of CH₃I from Airstreams under Post-Accident Conditions by Charcoal Filters", in Proceedings of the OECD Workshop on Iodine Aspects of Severe Accident Management, Vantaa, Finland, May 18-20, 1999, NEA/CSNI/R(99)7, pp. 281 - 296, Committee on the Safety of Nuclear Installations/Organization for Economic Cooperation and Development (1999).
27. R.J. Fluke, K.R. Weaver, W.C.H. Kupferschmidt, J.C. Wren, J.M. Ball and G.J. Evans "Recent Developments in Iodine Chemistry in Canada and Their Present and

- Future Application to Reactor Safety”, in Proceedings of the Fifth International Topical Meeting on Nuclear Thermalhydraulics, Operation and Safety. Beijing, China, p. W1.1-W1.5 (1997).
28. J.C. Wren, G.A. Glowa and J.M. Ball, “Modelling Iodine Behaviour Using LIRIC 3.0”, in Proceedings of the Fourth CSNI/OECD Workshop on the Chemistry of Iodine in Reactor Safety, Wurenlingen, Switzerland, NEACSNIR966, p. 507-530 (1996).
 29. J.C. Wren, J.M. Ball, G.A. Glowa, G.G. Sanipelli, R. Portman “The Interaction of Iodine with Organic Material in Containment” in Proceedings of the Fourth CSNI/OECD Workshop on the Chemistry of Iodine in Reactor Safety, Wurenlingen, Switzerland, NEA/CSNI/R(96) 6, pp. 323-344 (1996).
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 33. J.M. Ball, J.C. Wren, R. Portman and G.G. Sanipelli, “Iodine Volatility in Containment: The Role of Organic Surfaces”, in Proceedings of the 3rd International Conference on Containment Design and Operation, Toronto, Ontario (1994).
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 35. J.C. Wren, N.H. Sagert and H.E. Sims, “Modelling of Iodine Chemistry: The LIRIC Database”, in Proceedings of the Third CSNI Workshop on Iodine Chemistry in Reactor Safety, September 1991, Tokai-muri, Japan, Editors, K. Ishigure, M. Saeki, K. Soda and J. Sigimoto, JAERI M 92 012, pp. 381-395 (1992).
 36. J.M. Ball, G.J. Evans, R.J. Fluke, and W.C.H. Kupferschmidt, “Evaluating Radioiodine Volatility for Environmental Assessments of Nuclear Reactor Accidents,” Proc. 42nd CSCHE Conference, Toronto, ON. (1992).
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53. Kupferschmidt, W.C.H., Ball, J.M., Buttazoni, J.B., Evans, G.J., Jobe, D.J., Melnyk, A.J., Palson, A.S., Portman, R. and Sanipelli, G.G., "Final Report on the ACE/RTF Experiments," Advanced Containment Experiments Report, Electric Power Research Institute, ACE-TR-B3 (1992)
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