

## 2007 RSC Publications

1. Altin PA, Goossens DJ **Diffuse X-ray scattering from optically pure ibuprofen**. In *Proceedings of the 31st Australian Institute of Physics Condensed Matter and Materials Meeting* (2007) Paper #2. [http://www.aip.org.au/wagga2007/2007\\_2.pdf](http://www.aip.org.au/wagga2007/2007_2.pdf)
2. Addicoat MA, Buntine MA, Metha GF, Gilbert ATB, Gill PMW **BFW: a density functional for transition metal clusters**. *J. Phys. Chem. A* (2007), 111(13), 2625–2628. <http://dx.doi.org/10.1021/jp067752l>
3. Backes M, Banwell MG **First update to (S)-2-methoxymethylpyrrolidine**. In *Encyclopedia of Reagents for Organic Synthesis [Online (eEROS)]*, eds. Paquette LA, Crich D, Fuchs PL, Molander G. John Wiley & Sons Ltd. (2007), <http://www.mrw.interscience.wiley.com/eros/articles/rm114/frame.html>.
4. Banwell MG *Australian Journal of Chemistry* celebrates its sixtieth anniversary. *Aust. J. Chem.* (2007), 60(1), 1–2. <http://dx.doi.org/10.1071/CH07007>
5. Banwell MG, Austin KAB, Willis AC **Chemoenzymatic total syntheses of the linear triquinane-type natural products (+)-hirsutic acid and (–)-complicatic acid from toluene**. *Tetrahedron* (2007), 63(28), 6388–6403. <http://dx.doi.org/10.1016/j.tet.2007.03.073>
6. Banwell MG, Dauge D, Willis AC **Diisopropyl 1-(methylsulfonyl)hydrazine-1,2-dicarboxylate**. *Acta Crystallogr., Sect. E: Struct. Rep. Online* (2007), 63(4), o2009–o2011. <http://dx.doi.org/10.1107/S1600536807011737>
7. Banwell MG, Holden KE, Willis AC **Methyl 3,4-dibromo-2-(triisopropylsilyl)-1H-pyrrole-1-carboxylate**. *Acta Crystallogr., Sect. E: Struct. Rep. Online* (2007), 63(9), o3712. <http://www.iucr.org/cgi-bin/paper?hg2268>
8. Banwell MG, Kokas OJ, Willis AC **A cocrystal of (2S,3aS,4R,5R,7aS)- and (2R,3aS,4R,5R,7aS)-7-bromo-2-(4-methoxyphenyl)-3a,4,5,7a-tetrahydro-1,3-benzodioxole-4,5-diol (17:3)**. *Acta Crystallogr., Sect. E: Struct. Rep. Online* (2007), 63(10), o4187. <http://dx.doi.org/10.1107/S1600536807046995>
9. Banwell MG, Kokas OJ, Willis AC **(2R,3aS,5aR,8aR,8bS)-4-Bromo-2-(4-methoxyphenyl)-7,7-dimethyl-3a,5a,8a,8b-tetrahydrobenzo[1,2-d:3,4-d']bis[1,3]dioxole**. *Acta Crystallogr., Sect. E: Struct. Rep. Online* (2007), 63(9), o3820. <http://www.iucr.org/cgi-bin/paper?bt2471>
10. Banwell MG, Kokas OJ, Willis AC **Chemoenzymatic approaches to the montanine alkaloids: a total synthesis of (+)-brunsvigine**. *Org. Lett.* (2007), 9(18), 3503–3506. <http://dx.doi.org/10.1021/ol071344y>
11. Banwell MG, Offermann DA **First update to iodylbenzene**. In *Encyclopedia of Reagents for Organic Synthesis [Online (eEROS)]*, eds. Paquette LA, Crich D, Fuchs PL, Molander G, John Wiley & Sons Ltd. (2007), <http://www.mrw.interscience.wiley.com/eros/articles/ri048/frame.html>
12. Beckwith ALJ **Nonconjugated carbon radicals**. In *Magnetic Properties of Free Radicals*. Fischer H, ed. Landolt–Börnstein Numerical Data and Functional Relationships in Science and Technology Series, Group II (Molecules and Radicals), Springer–Verlag: Berlin (2007), Vol. 26A, Part 1, pp. 179–431.
13. Bennett MA, Bhargava SK, Messelhäuser J, Privér SH, Welling LL, Willis AC **ortho-Metallated complexes of platinum(II) and diplatinum(I) containing the carbanions (2-diphenylphosphino)phenyl and (2-diphenylphosphino)-n-tolyl (n = 5, 6)**. *Dalton Trans.* (2007), (29), 3158–3169. <http://dx.doi.org/10.1039/b702808c>
14. Bennett MA, Byrnes MJ, Willis AC **Bis(acetylacetonato)ruthenium(II) complexes containing alkynyl-diphenylphosphines. Formation and redox behavior of [Ru(acac)<sub>2</sub>(Ph<sub>2</sub>PC≡CR)<sub>2</sub>] (R = H, Me, Ph) complexes and the binuclear complex cis-[[Ru(acac)<sub>2</sub>]<sub>2</sub>(μ-Ph<sub>2</sub>PC≡CPh<sub>2</sub>)<sub>2</sub>]**. *Dalton Trans.* (2007), (17), 1677–1686. <http://dx.doi.org/10.1039/b618365d>
15. Bernhardt PV, Bramley R, Geue RJ, Ralph SF, Sargeson AM **An expanded cavity hexamine cage for copper(II)**. *Dalton Trans.* (2007), (12), 1244–1249. <http://dx.doi.org/10.1039/b617153b>
16. Bissember AC, Phillis AT, Banwell MG, Willis AC **Base-promoted reactions of dichlorocarbene**

- adducts of cyclic enamines: a new route to annulated pyrroles.** *Org. Lett.* (2007) 9(26), 5421–5424. <http://dx.doi.org/10.1021/ol7021774>
17. Bradford TA, Payne AD, Willis AC, Paddon-Row MN, Sherburn MS **Cross-coupling for cross-conjugation: practical synthesis and Diels–Alder reactions of [3]dendralenes.** *Org. Lett.* (2007), 9(23), 4861–4864. <http://dx.doi.org/10.1021/ol7021998>
  18. Bravo-Nuevo A, Williams NK, Valter K, Stone J **Relationship between mitochondrial DNA damage and photoreceptor death in developing and adult retina, assessed in normal and degenerative rat strains.** *Mitochondrion* (2007), 7(5), 340–346. <http://dx.doi.org/10.1016/j.mito.2007.05.003>
  19. Brown DJ *The Naphthyridines.* The Chemistry of Heterocyclic Compounds Series Volume 63, John Wiley & Sons: New York (2007), pp. 423 + xix.
  20. Burden CJ, Oakley AJ **Anisotropic atomic motions in high-resolution protein crystallography molecular dynamics simulations.** *Phys. Biol.* (2007), 4(2), 79–90. <http://dx.doi.org/10.1088/1478-3975/4/2/002>
  21. Bygott AMT, Geue RJ, Ralph SF, Sargeson AM, Willis AC **Octahedral and trigonal prismatic structure preferences in a bicyclic hexamine cage for zinc(II), cadmium(II) and mercury(II) ions.** *Dalton Trans.* (2007), (42), 4778–4787. <http://dx.doi.org/10.1039/b711879a>
  22. Carberry DM, Baker MAB, Wang GM, Sevick EM, Evans DJ **An optical trap experiment to demonstrate fluctuation theorems in viscoelastic media.** *J. Opt. A: Pure Appl. Opt.* (2007), 9(8), S204–S214. <http://dx.doi.org/10.1088/1464-4258/9/8/S13>
  23. Chand S, Banwell MG **Biomimetic preparation of the racemic modifications of the stilbenolignan aiphanol and three congeners.** *Aust. J. Chem.* (2007), 60(4), 243–250. <http://dx.doi.org/10.1071/CH07044>
  24. Chand S, Willis AC **(1R,2R)-1-(2-Bromo-4-hydroxy-3,5-dimethoxyphenyl)-2,3-dihydroxypropanol.** *Acta Crystallogr., Sect. E: Struct. Rep. Online* (2007), 63(12), o4505. <http://dx.doi.org/10.1107/S160053680705310X>
  25. Chand S, Willis AC **(1S,2S)-1-(2-Bromo-4-hydroxy-3,5-dimethoxyphenyl)propane-1,2,3-triol.** *Acta Crystallogr., Sect. E: Struct. Rep. Online* (2007), 63(12), o4866. <http://dx.doi.org/10.1107/S1600536807058035>
  26. Chandra L, Buckley CE, Connolly J, Norén L, Lockhart G, Gilbert E **Superstructure phase in the binary C<sub>28</sub>H<sub>58</sub>:C<sub>36</sub>H<sub>74</sub> system.** *J. Appl. Crystallogr.* (2007), 40(1), 51–55. <http://dx.doi.org/10.1107/S0021889806048217>
  27. Chen H, Chen Y, Li CP, Zhang H, Williams JS, Liu Y, Liu Z, Ringer SP **Eu-doped boron nitride nanotubes as a nanometer-sized visible-light source.** *Adv. Mater.* (2007), 19(14), 1845–1848. <http://dx.doi.org/10.1002/adma.200700493>
  28. Chen H, Chen Y, Liu Y, Xu C-N, Williams JS **Light emission and excitonic effect of boron nitride nanotubes observed by photoluminescent spectra.** *Opt. Mater.* (2007), 29(11), 1295–1298. <http://dx.doi.org/10.1016/j.optmat.2006.05.006>
  29. Clancy P, Xu Y, van Heeswijk WC, Vasudevan SG, Ollis DL **The domains carrying the opposing activities in adenylyltransferase are separated by a central regulatory domain.** *FEBS J.* (2007), 274(11), 2865–2877. <http://dx.doi.org/10.1111/j.1742-4658.2007.05820.x>
  30. Collins MA **Molecular potential energy surfaces constructed from interpolation of systematic fragment surfaces.** *J. Chem. Phys.* (2007), 127(2), 024104/1–10. <http://dx.doi.org/10.1063/1.2746025>
  31. Coote ML, Hodgson JL, Krenske EH, Namazian M, Wild SB **Radical ring-opening polymerization of phosphorus heterocycles: computational design of suitable phosphetane monomers.** *Aust. J. Chem.* (2007), 60(10), 744–753. <http://dx.doi.org/10.1071/CH07121>
  32. Coote ML, Hodgson JL, Krenske EH, Wild SB **Anionic ring-opening polymerization of small phosphorus heterocycles and their borane adducts: an ab initio investigation.** *Heteroat. Chem.* (2007), 18(2), 118–128. <http://dx.doi.org/10.1002/hc.20323>
  33. Cowley AR, Hector AL, Hill AF, White AJP, Williams DJ, Wilton-Ely JDET **Synthesis and**

- reactions of five-coordinate mono- and binuclear thiocarbonyl-alkenyl and thioacyl complexes of ruthenium(II). *Organometallics* (2007), 26(25), 6114–6125.  
<http://dx.doi.org/10.1021/om700518m>
34. Creagh DC, Kubik ME, Sterns M **On the feasibility of establishing the provenance of Australian Aboriginal artifacts using synchrotron radiation X-ray diffraction and proton-induced X-ray emission.** *Nucl. Instrum. Methods Phys. Res., Sect. A* (2007), 580(1), 721–724.  
<http://dx.doi.org/10.1016/j.nima.2007.05.134>
  35. Crittenden DL, Dumont EE, Gill PMW **Intracule functional models: II. Analytically integrable kernels.** *J. Chem. Phys.* (2007), 127(14), 141103/1–5. <http://dx.doi.org/10.1063/1.2795694>
  36. Crittenden DL, Gill PMW **Computation and interpretation of molecular Omega intracules.** *J. Chem. Phys.* (2007), 127(1), 014101/1–9. <http://dx.doi.org/10.1063/1.2746028>
  37. Crossley IR, Hill AF, Willis AC **Metallaboratranes: the M→B dative bond as a ligand activating function in the phosphaboration of carbon monosulfide.** *Organometallics* (2007), 26(16), 3891–3895. <http://dx.doi.org/10.1021/om700433q>
  38. Dawson RE, Easton CJ, Lincoln, SF, Onagi H **Stilbene and  $\alpha$ -cyclodextrin as the basis of a light driven molecular muscle.** In *Proceedings of the Fourth Asian Cyclodextrin Conference (ACC2007)* (2007), 84–91.
  39. Dumont EE, Crittenden DL, Gill PMW **Intracule functional models: I. Angle-corrected correlation kernels.** *Phys. Chem. Chem. Phys.* (2007), 9(39), 5340–5343.  
<http://dx.doi.org/10.1039/b709513a>
  40. Ely F, Foo J-L, Jackson CJ, Gahan LR, Ollis D, Schenk G **Enzymatic bioremediation: organophosphate degradation by binuclear metallo-hydrolases.** *Curr. Top. Biochem. Res.* (2007), 9(2), 63–78.
  41. Evans DJ, Morriss GP **Statistical Mechanics of Nonequilibrium Liquids. 2nd Edn.** ANU E Press: Canberra (2007), pp. v–302.
  42. Foot JS, Banwell MG **First update to palladium(II) acetate.** In *Reagents for Direct Functionalization of C–H Bonds*, Fuchs PL, ed. In the series: *Handbook of Reagents for Organic Synthesis*, Paquette LA, Crich D, Fuchs PL, Molander G, eds. John Wiley & Sons Ltd.: Chichester (2007), pp. 239–253.
  43. Ford JL, Gugger PA, Wild SB, Mendz GL **Phenylphosphonate transport by *Helicobacter pylori*.** *Helicobacter* (2007), 12(6), 609–615. <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1523-5378.2007.00550.x>
  44. Gill, PMW **Efficient calculation of  $p$ -values in linear-statistic permutation significance tests.** *J. Stat. Comput. Simul.* (2007), 77(1), 55–61. <http://dx.doi.org/10.1080/10629360500108053>
  45. Goodwin AL, Withers RL, Nguyen H-B **Real-space refinement of single-crystal electron diffuse scattering and its application to  $\text{Bi}_2\text{Ru}_2\text{O}_{7-\delta}$ .** *J. Phys.: Condens. Matter* (2007), 19(33), 335216/1–15. <http://dx.doi.org/10.1088/0953-8984/19/33/335216>
  46. Goossens DJ, Heerdegen AP, Welberry TR, Beasley AG **The molecular conformation of Ibuprofen,  $\text{C}_{13}\text{H}_{18}\text{O}_2$ , through X-ray diffuse scattering.** *Int. J. Pharm.* (2007), 343(1–2), 59–68.  
<http://dx.doi.org/10.1016/j.ijpharm.2007.04.023>
  47. Goossens DJ, Welberry TR, Heerdegen AP, Gutmann MJ **Simultaneous fitting of X-ray and neutron diffuse scattering data.** *Acta Crystallogr., Sect. A: Found. Crystallogr.* (2007), 63(1), 30–35. <http://dx.doi.org/10.1107/S0108767306046976>
  48. Harcourt RD, Schaefer K, Coote ML **Some comments on valence bond representations for the radical exchange reaction  $\text{X}^\bullet + \text{R}:\text{Y} \rightarrow \text{X}:\text{R} + \text{Y}^\bullet$ .** *J. Phys. Chem. A* (2007), 111(50), 13278–13282. <http://dx.doi.org/10.1021/jp076864p>
  49. Hill AF, Rae AD, Schultz M, Willis AC **Bis(alkynyl), metallacyclopentadiene, and diphenylbutadiyne complexes of ruthenium.** *Organometallics* (2007), 26(6), 1325–1338.  
<http://dx.doi.org/10.1021/om060888l>
  50. Hill AF, Smith MK **A homoleptic hydrotris(methimazolyl)borate complex of titanium.** *Dalton*

- Trans.* (2007), (31), 3363–3364. <http://dx.doi.org/10.1039/b707265a>
51. Hill AF, Smith MK **Cyclooctatetraene poly(azoly)borate complexes of zirconium: [Zr( $\kappa^2$ -L)Cl( $\eta$ -C<sub>8</sub>H<sub>8</sub>)] (L = H<sub>2</sub>B(pz)<sub>2</sub>, HB(pzMe<sub>2</sub>)<sub>3</sub>, H<sub>2</sub>B(mt)<sub>2</sub>; pz = pyrazolyl, mt = methimazolyl).** *Organometallics* (2007), 26(16), 3900–3903. <http://dx.doi.org/10.1021/om700484h>
  52. Hill AF, Smith MK **Organometallic tantalum tris(methimazolyl)borato complexes: [Ta( $\eta^2$ -RC≡CR)Cl<sub>2</sub>(HB(mt)<sub>3</sub>)] (R = Ph, Et; mt = methimazolyl).** *Organometallics* (2007), 26(18), 4688–4691. <http://dx.doi.org/10.1021/om700615w>
  53. Hill AF, Tshabang N, Willis AC **Poly(methimazolyl)borate alkyne complexes of molybdenum and tungsten.** *Eur. J. Inorg. Chem.* (2007), (24), 3781–3785. <http://dx.doi.org/10.1002/ejic.200700471>
  54. Hodgson JL, Namazian M, Bottle SE, Coote ML **One-electron oxidation and reduction potentials of nitroxide antioxidants: a theoretical study.** *J. Phys. Chem. A* (2007), 111(51), 13595–13605. <http://dx.doi.org/10.1021/jp074250e>
  55. Hughes JL, Krausz E **Electronic spectroscopy.** In *Applications of Physical Methods to Inorganic and Bioinorganic Chemistry*. Scott RA, Lukehart CM, eds. John Wiley and Sons: Chichester, UK (2007), pp. 79–98.
  56. Hughes JL, Krausz E **Novel characteristics of persistent spectral hole-burning and hole-filling in Photosystem II core complexes.** *J. Lumin.* (2007), 127(1), 239–244. <http://dx.doi.org/10.1016/j.jlumin.2007.02.030>
  57. Hughes JL, Smith PJ, Pace RJ, Krausz E **Low-energy absorption and luminescence of higher plant photosystem II core samples.** *J. Lumin.* (2007), 122–123, 284–287. <http://dx.doi.org/10.1016/j.jlumin.2006.01.142>
  58. Hutchison WD, Goossens DJ, Saensunon B, Stewart GA, Avdeev M, Nishimura K **Magnetic order studies of ErNiAl<sub>4</sub>.** In *Proceedings of the 31st Australian Institute of Physics Condensed Matter and Materials Meeting* (2007) Paper #10. [http://www.aip.org.au/wagga2007/2007\\_10.pdf](http://www.aip.org.au/wagga2007/2007_10.pdf)
  59. Hutt OE, Mander LN **Studies toward the total synthesis of nominine.** *J. Org. Chem.* (2007), 72(26), 10130–10140. <http://dx.doi.org/10.1021/jo701995u>
  60. Izgorodina EI, Brittain DRB, Hodgson JL, Krenske EH, Lin CY, Namazian M, Coote ML **Should contemporary density functional theory methods be used to study the thermodynamics of radical reactions?** *J. Phys. Chem. A* (2007), 111(42), 10754–10768. <http://dx.doi.org/10.1021/jp075837w>
  61. Izgorodina EI, Lin CY, Coote ML **Energy-directed tree search: an efficient systematic algorithm for finding the lowest energy conformation of molecules.** *Phys. Chem. Chem. Phys.* (2007), 9(20), 2507–2516. <http://dx.doi.org/10.1039/b700938k>
  62. Jackson CJ, Carr PD, Liu J-W, Watt SJ, Beck JL, Ollis DL **The structure and function of a novel glycerophosphodiesterase from *Enterobacter aerogenes*.** *J. Mol. Biol.* (2007), 367(4), 1047–1062. <http://dx.doi.org/10.1016/j.jmb.2007.01.032>
  63. James M, Avdeev M, Barnes P, Morales L, Wallwork K, Withers R **Orthorhombic superstructures within the rare earth strontium-doped cobaltate perovskites: Ln<sub>1-x</sub>Sr<sub>x</sub>CoO<sub>3-δ</sub> (Ln = Y<sup>3+</sup>, Dy<sup>3+</sup>–Yb<sup>3+</sup>; 0.750 ≤ x ≤ 0.875).** *J. Solid State Chem.* (2007), 180(8), 2233–2247. <http://dx.doi.org/10.1016/j.jssc.2007.04.029>
  64. James VJ **Advances in understanding why the diffraction pattern of hair changes in breast cancer.** *SIICsalud* (2007), December 6 issue, Invited Experts Section. <http://www.siicsalud.com/dato/experto.php/90130#abs>
  65. Jergic S, Ozawa K, Williams NK, Su X-C, Scott DD, Hamdan SM, Crowther JA, Otting G, Dixon NE **The unstructured C-terminus of the  $\tau$  subunit of *Escherichia coli* DNA polymerase III holoenzyme is the site of interaction with the  $\alpha$  subunit.** *Nucleic Acids Res.* (2007), 35(9), 2813–2824. <http://dx.doi.org/10.1093/nar/gkm079>
  66. John M, Headlam MJ, Dixon NE, Otting G **Assignment of paramagnetic <sup>15</sup>N-HSQC spectra by heteronuclear exchange spectroscopy.** *J. Biomol. NMR* (2007), 37(1), 43–51. <http://dx.doi.org/10.1007/s10858-006-9098-6>

67. John M, Otting G **Strategies for measurements of pseudocontact shifts in protein NMR spectroscopy.** *ChemPhysChem* (2007), 8(16), 2309–2313. <http://dx.doi.org/10.1002/cphc.200700510>
68. John M, Park AY, Dixon NE, Otting G **NMR detection of protein <sup>15</sup>N spins near paramagnetic lanthanide ions.** *J. Am. Chem. Soc.* (2007), 129(3), 462–463. <http://dx.doi.org/10.1021/ja066995o>
69. John M, Schmitz C, Park AY, Dixon NE, Huber T, Otting G **Sequence-specific and stereospecific assignment of methyl groups using paramagnetic lanthanides.** *J. Am. Chem. Soc.* (2007), 129(44), 13749–13757. <http://dx.doi.org/10.1021/ja0744753>
70. Keniry MA, Owen EA **An investigation of the dynamics of spermine bound to duplex and quadruplex DNA by <sup>13</sup>C NMR spectroscopy.** *Eur. Biophys. J.* (2007), 36(6), 637–646. <http://dx.doi.org/10.1007/s00249-007-0136-4>
71. Kennedy DF, Messerle BA, Smith MK **Synthesis of Cp\* iridium and rhodium complexes containing bidentate sp<sup>2</sup>-N-donor ligands and counter-anions [Cp\*MCl<sub>3</sub>]<sup>+</sup>.** *Eur. J. Inorg. Chem.* (2007), (1), 80–89. <http://dx.doi.org/10.1002/ejic.200600735>
72. Kilah NL, Petrie S, Stranger R, Wielandt JW, Willis AC, Wild SB **Triphenylphosphine-stabilized diphenyl-arsenium, -stibenium, and -bismuthenium salts.** *Organometallics* (2007), 26(25), 6106–6113. <http://dx.doi.org/10.1021/om700512h>
73. Kitto HJ, Rae AD, Webster RD, Willis AC, Wild SB **Synthesis, structure, and electrochemistry of di- and zerovalent nickel, palladium, and platinum monomers and dimers derived from an enantiopure (S,S)-tetra(tertiary phosphine).** *Inorg. Chem.* (2007), 46(19), 8059–8070. <http://dx.doi.org/10.1021/ic700912q>
74. Krenske EH, Coote ML **Effects of substituents on the stabilities of phosphonyl radicals and their hydroxyphosphinyl tautomers.** *J. Phys. Chem. A* (2007), 111(33), 8229–8240. <http://dx.doi.org/10.1021/jp072358o>
75. Krivokapic I, Zerara M, Lawson Daku M, Vargas A, Enachescu C, Ambrus C, Tregenna-Piggott P, Amstutz N, Krausz E, Hauser A **Spin-crossover in cobalt(II) imine complexes.** *Coord. Chem. Rev.* (2007), 251(3+4), 364–378. <http://dx.doi.org/10.1016/j.ccr.2006.05.006>
76. Kuimova MK, Gill PMW, Lin C-Y, Matousek P, Towrie M, Sun XZ, George MW, Parker AW **Picosecond time-resolved infrared study of 2-aminopurine ionisation in solution.** *Photochem. Photobiol. Sci.* (2007), 6(9), 949–955. <http://dx.doi.org/10.1039/b705801b>
77. Ladewig BP, Knott RB, Hill AJ, Riches JD, White JW, Martin DJ, Diniz da Costa JC, Lu GQ **Physical and electrochemical characterization of nanocomposite membranes of nafion and functionalized silicon oxide.** *Chem. Mater.* (2007), 19(9), 2372–2381. <http://dx.doi.org/10.1021/cm0628698>
78. Larsson A-K, Carnerup, AM, Hyde ST, Fitz Gerald JD **Crystallography of biomimetic silica carbonate precipitates.** In *Proceedings of the 31st Australian Institute of Physics Condensed Matter and Materials Meeting* (2007) Paper #11. [http://www.aip.org.au/wagga2007/2007\\_11.pdf](http://www.aip.org.au/wagga2007/2007_11.pdf)
79. Larsson A-K, Garcia-Garcia FJ, Withers RL **The incommensurately modulated NiGe<sub>1-x</sub>P<sub>x</sub>, ~0.3 ≤ x ≤ ~0.7, solid solution: the ‘missing link’ between the NiP and MnP structure types.** *J. Solid State Chem.* (2007), 180(3), 1093–1102. <http://dx.doi.org/10.1016/j.jssc.2007.01.006>
80. Larsson A-K, Norén L, Withers RL, Rundlöf H **Coupled In/Te and Ni/vacancy ordering and the modulated crystal structure of a B8 type, Ni<sub>3+x</sub>In<sub>1-y</sub>Te<sub>2+y</sub> solid solution phase.** *J. Solid State Chem.* (2007), 180(10), 2723–2733. <http://dx.doi.org/10.1016/j.jssc.2007.07.020>
81. Lin CY, Coote ML, Petit A, Richard P, Poli R, Matyjaszewski K **Ab initio study of the penultimate effect for the ATRP activation step using propylene, methyl acrylate, and methyl methacrylate monomers.** *Macromolecules* (2007), 40(16), 5985–5994. <http://dx.doi.org/10.1021/ma070911u>
82. Lincoln SF, Easton CJ **Aspects of cyclodextrin polymers.** In *Proceedings of the Fourth Asian Cyclodextrin Conference (ACC2007)* (2007), 34–41.
83. Liu J-W, Hadler KS, Schenk G, Ollis D **Using directed evolution to improve the solubility of the C-terminal domain of *Escherichia coli* aminopeptidase P.** *FEBS J.* (2007), 274(18), 4742–4751.

<http://dx.doi.org/10.1111/j.1742-4658.2007.06022.x>

84. Liu Y, Withers RL, Nguyen BH, Elliot KJC **Bi-based pyrochlore ceramics**. Australian Provisional Patent Application Number 2007903107 (filed 8 June 2007).
85. Liu Y, Withers RL, Nguyen B, Elliott K **Structurally frustrated polar nanoregions in BaTiO<sub>3</sub>-based relaxor ferroelectric systems**. *Appl. Phys. Lett.* (2007), 91(15), 152907/1–3. <http://dx.doi.org/10.1063/1.2790481>
86. Liu Y, Withers RL, Nguyen B, Wei XY **Towards the development of high performance, frequency agile, RF/microwave ceramics based on nanoscale structural analysis**. *J. Aust. Ceram. Soc.* (2007), 43(2), 75–78. <http://www.austceram.com/ACS-Journal-2007-Liu2.asp>
87. Liu Y, Withers RL, Wei X, Fitz Gerald JD **Structured diffuse scattering and polar nano-regions in the Ba(Ti<sub>1-x</sub>Sn<sub>x</sub>)O<sub>3</sub> relaxor ferroelectric system**. *J. Solid State Chem.* (2007), 180(3), 858–865. <http://dx.doi.org/10.1016/j.jssc.2006.12.013>
88. Liu Y, Withers RL, Wei X, Fitz Gerald JD **Structured diffuse scattering and polar nano-regions in the Ba(Ti<sub>1-x</sub>Sn<sub>x</sub>)O<sub>3</sub> relaxor ferroelectric system**. In *Proceedings of the 31st Australian Institute of Physics Condensed Matter and Materials Meeting*, (2007) Paper #14. [http://www.aip.org.au/wagga2007/2007\\_14.pdf](http://www.aip.org.au/wagga2007/2007_14.pdf)
89. Liu Y, Withers RL, Welberry TR **Superstructure phase of microwave dielectric (Bi<sub>1.5</sub>Zn<sub>0.5</sub>)(Ti<sub>1.5</sub>Nb<sub>0.5</sub>)O<sub>7</sub> pyrochlore**. In *Proceedings of the 31st Australian Institute of Physics Condensed Matter and Materials Meeting* (2007) Paper #13. [http://www.aip.org.au/wagga2007/2007\\_13.pdf](http://www.aip.org.au/wagga2007/2007_13.pdf)
90. Longshaw AI, Carland MW, Krenske EH, Coote ML, Sherburn MS **Tris(trimethylsilyl)methane is not an effective mediator of radical reactions**. *Tetrahedron Lett.* (2007), 48(32), 5585–5588. <http://dx.doi.org/10.1016/j.tetlet.2007.06.055>
91. Mahon DC, Mahon PJ, Creagh DC **The effect of laser excitation on the Raman microspectroscopy of nanoindentation-induced silicon phase transformation**. *Nucl. Instrum. Methods Phys. Res., Sect. A* (2007), 580(1), 430–433. <http://dx.doi.org/10.1016/j.nima.2007.05.071>
92. Maniam S, Lincoln SF, Easton CJ **Developing chemistry for the synthesis of three-stationed rotaxane molecular switches**. In *Proceedings of the Fourth Asian Cyclodextrin Conference (ACC2007)* (2007), 110–117.
93. Matveenko M, Kokas OJ, Banwell MG, Willis AC **Chemoenzymatic approaches to lycorine-type Amaryllidaceae alkaloids: total syntheses of ent-lycoricidine, 3-epi-ent-lycoricidine and 4-deoxy-3-epi-ent-lycoricidine**. *Org. Lett.* (2007), 9(18), 3683–3685. <http://dx.doi.org/10.1021/ol701552r>
94. Miller NA, Willis AC, Paddon-Row MN, Sherburn MS **Chiral dendralenes for rapid access to enantiomerically pure polycycles**. *Angew. Chem. Int. Ed.* (2007), 46(6), 937–940. <http://dx.doi.org/10.1002/anie.200603335>
95. Mittag E, Evans DJ, Williams SR **Verification of time-reversibility requirement for systems satisfying the Evans–Searles fluctuation theorem**. *Pure Appl. Chem.* (2007), 79(8), 1361–1368. <http://dx.doi.org/10.1351/pac200779081361>
96. Namazian M, Coote ML **Accurate calculation of absolute one-electron redox potentials of some para-quinone derivatives in acetonitrile**. *J. Phys. Chem. A* (2007), 111(30), 7227–7232. <http://dx.doi.org/10.1021/jp0725883>
97. Netzloff HM, Collins MA **Ab initio energies of nonconducting crystals by systematic fragmentation**. *J. Chem. Phys.* (2007), 127(13), 134113/1–13. <http://dx.doi.org/10.1063/1.2768534>
98. Nguyen B, Liu Y, Withers RL **The local crystal chemistry and dielectric properties of the cubic pyrochlore phase in the Bi<sub>2</sub>O<sub>3</sub>–M<sup>2+</sup>O–Nb<sub>2</sub>O<sub>5</sub> (M<sup>2+</sup> = Ni<sup>2+</sup> and Mg<sup>2+</sup>) systems**. *J. Solid State Chem.* (2007), 180(2), 549–557. <http://dx.doi.org/10.1016/j.jssc.2006.10.039>
99. Nguyen HB, Norén L, Liu Y, Withers RL, Wei X, Elcombe MM **The disordered structures and low temperature dielectric relaxation properties of two misplaced-displacive cubic pyrochlores found in the Bi<sub>2</sub>O<sub>3</sub>–M<sup>II</sup>O–Nb<sub>2</sub>O<sub>5</sub> (M = Mg, Ni) systems**. *J. Solid State Chem.* (2007), 180(9), 2558–2565. <http://dx.doi.org/10.1016/j.jssc.2007.07.003>

100. Norén L, Larsson A-K, Withers, RL, Rundlöf H **Te for two II: a neutron powder diffraction study of the structure of the structure of the "Ni<sub>3</sub>InTe<sub>2</sub>" solid solution.** In *Proceedings of the 31st Australian Institute of Physics Condensed Matter and Materials Meeting*, (2007) Paper #17. [http://www.aip.org.au/wagga2007/2007\\_17.pdf](http://www.aip.org.au/wagga2007/2007_17.pdf)
101. O'Sullivan TP, Zhang H, Mander LN **Model studies toward the synthesis of the bioactive diterpenoid, harringtonolide.** *Org. Biomol. Chem.* (2007), 5(16), 2627–2635. <http://dx.doi.org/10.1039/b707467k>
102. Padmakshan D, Bennett SA, Otting G, Easton CJ **Stereocontrolled synthesis of (S)- $\gamma$ -fluoroleucine.** *Synlett* (2007), (7), 1083–1084. <http://dx.doi.org/10.1055/s-2007-977420>
103. Perriman AW, Henderson MJ, Holt SA, White JW **Effect of the air-water interface on the stability of  $\beta$ -lactoglobulin.** *J. Phys. Chem. B* (2007), 111(48), 13527–13537. <http://dx.doi.org/10.1021/jp074777r>
104. Philbrook A, Easton CJ, Earnshaw S, Webber TR **Fluorescent tags for amino resins.** *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* (2007), 48(2), 496–497.
105. Pinkerton DM, Banwell MG, Willis AC **Total syntheses of tambjamines C, E, F, G, H, I and J, BE-18591 and a related alkaloid from the marine bacterium *Pseudoalteromonas tunicata*.** *Org. Lett.* (2007), 9(24), 5127–5130. <http://dx.doi.org/10.1021/ol7024313>
106. Pintacuda G, John M, Su X-C, Otting G **NMR structure determination of protein-ligand complexes by lanthanide labeling.** *Acc. Chem. Res.* (2007), 40(3), 206–212. <http://dx.doi.org/10.1021/ar050087z>
107. Powell CE, Cifuentes MP, Humphrey MG, Willis AC, Morrall JP, Samoc M **Organometallic complexes for nonlinear optics. 37: Synthesis and third-order nonlinear optical properties of a hexarutheniumtriplatinum dendrimer.** *Polyhedron* (2007), 26(2), 284–289. <http://dx.doi.org/10.1016/j.poly.2006.05.007>
108. Prabhakar R, Sevick EM, Williams DRM **Coarse-graining intramolecular hydrodynamic interaction in dilute solutions of flexible polymers.** *Phys. Rev. E: Stat., Nonlinear, Soft Matter Phys.* (2007), 76(1), 011809/1–12. <http://dx.doi.org/10.1103/PhysRevE.76.011809>
109. Qi R, Fetzner S, Oakley AJ **Crystallization and diffraction data of 1H-3-hydroxy-4-oxoquinoline 2,4-dioxygenase: a cofactor-free oxygenase of the  $\alpha/\beta$ -hydrolase family.** *Acta Crystallogr., Sect. F: Struct. Biol. Cryst. Commun.* (2007), 63(5), 378–381. <http://dx.doi.org/10.1107/S1744309107013760>
110. Randles MD, Lucas NT, Cifuentes MP, Humphrey MG, Smith MK, Willis AC, Samoc M **Mixed-metal cluster chemistry. 30. Syntheses and optical limiting properties of cluster-containing oligo- and polyurethanes.** *Macromolecules* (2007), 40(22), 7807–7818. <http://dx.doi.org/10.1021/ma0710582>
111. Randles MD, Willis AC, Cifuentes MP, Humphrey MG **High-nuclearity ruthenium carbonyl cluster chemistry. 8: Phosphine activation, CO insertion, and deruthenation at a phosphido cluster – X-ray structures of [ppn][Ru<sub>8</sub>( $\mu_8$ -P)( $\mu$ -CO)<sub>2</sub>(CO)<sub>20</sub>] and [ppn][Ru<sub>7</sub>( $\mu_7$ -P)( $\mu$ - $\eta^2$ -OCP)( $\mu$ -PPh<sub>2</sub>)( $\mu$ -CO)(CO)<sub>17</sub>].** *J. Organomet. Chem.* (2007), 692(21), 4467–4472. <http://dx.doi.org/10.1016/j.jorganchem.2007.03.040>
112. Rickards RW, Cornforth J **Arthur John Birch 1915–1995.** *Historical Records of Australian Science* (2007), 18(2), 243–280. <http://dx.doi.org/10.1071/HR07010>
113. Rickards RW, Cornforth J **Arthur John Birch 3 August 1915 – 8 December 1995.** *Biographical Memoirs of Fellows of the Royal Society* (2007), 53, 21–44. <http://dx.doi.org/10.1098/rsbm.2007.0017>
114. Sandala GM, Smith DM, Marsh ENG, Radom L **Toward an improved understanding of the glutamate mutase system.** *J. Am. Chem. Soc.* (2007), 129(6), 1623–1633. <http://dx.doi.org/10.1021/ja066432c>
115. Schoenes J, Withers RL, Hulliger F **Kondo-like behavior in ThAsSe and UAsSe.** *J. Magn. Magn. Mater.* (2007), 310(2, Pt. 2), 1778–1780. <http://dx.doi.org/10.1016/j.jmmm.2006.10.672>
116. Searles DJ, Rondoni L, Evans DJ **The steady state fluctuation relation for the dissipation**

- function.** *J. Stat. Phys.* (2007), 128(6), 1337–1363. <http://dx.doi.org/10.1007/s10955-007-9372-3>
117. Skropeta D, Rickards RW **Domino pericyclic reactions of acyclic conjugated (E,Z,E,E)-tetraenes.** *Tetrahedron Lett.* (2007), 48(18), 3281–3284. <http://dx.doi.org/10.1016/j.tetlet.2007.03.011>
118. Some S, Ray JK, Banwell MG, Jones MT **New protocols for the synthesis of 3,4-annulated and 4-substituted quinolines from  $\beta$ -bromo  $\alpha,\beta$ -unsaturated aldehydes and 1-bromo-2-nitrobenzene or 2-bromoacetanilide.** *Tetrahedron Lett.* (2007), 48(20), 3609–3612. <http://dx.doi.org/10.1016/j.tetlet.2007.03.078>
119. Sridhar T, Nguyen DA, Prabhakar R, Prakash JR **Rheological observation of glassy dynamics of dilute polymer solutions near the coil-stretch transition in elongational flows.** *Phys. Rev. Lett.* (2007), 98(16), 167801/1–4. <http://dx.doi.org/10.1103/PhysRevLett.98.167801>
120. Stanislawski PC, Willis AC, Banwell MG **gem-Dihalogenocyclopropanes as building blocks in natural product synthesis: enantioselective total syntheses of ent-erythramine and 3-epi-erythramine.** *Chem. Asian J.* (2007), 2(9), 1127–1136. <http://dx.doi.org/10.1002/asia.200700155>
121. Su X-C, Jergic S, Keniry MA, Dixon NE, Otting G **Solution structure of domains IVa and V of the  $\tau$  subunit of *Escherichia coli* DNA polymerase III and interaction with the  $\alpha$  subunit.** *Nucleic Acids Res.* (2007), 35(9), 2825–2832. <http://dx.doi.org/10.1093/nar/gkm080>
122. Su X-C, Jergic S, Ozawa K, Burns ND, Dixon NE, Otting G **Measurement of dissociation constants of high-molecular weight protein–protein complexes by transferred  $^{15}\text{N}$ -relaxation.** *J. Biomol. NMR* (2007), 38(1), 65–72. <http://dx.doi.org/10.1007/s10858-007-9147-9>
123. Sünneemann HW, Banwell MG, de Meijere A **Synthesis and use of new substituted 1,3,5-hexatrienes in studying thermally induced  $6\pi$ -electrocyclizations.** *Eur. J. Org. Chem.* (2007), (23), 3879–3893. <http://dx.doi.org/10.1002/ejoc.200700201>
124. Sünneemann HW, Hofmeister A, Magull J, Banwell MG, de Meijere A **Stille/Diels–Alder reaction sequences: diversity-oriented access to novel steroids.** *Org. Lett.* (2007), 9(3), 517–520. <http://dx.doi.org/10.1021/ol062878m>
125. Suwuntanasarn N, Hutchison WD, Milford GN, Bramley R **Novel pulsed electron spin resonance system and studies of phosphorus in natural silicon.** *Hyperfine Interact.* (2007), 180(1–3), 25–28. <http://dx.doi.org/10.1007/s10751-008-9682-0>
126. Thomas LH, Welberry TR, Goossens DJ, Heerdegen AP, Gutmann MJ, Teat SJ, Lee PL, Wilson CC, Cole JM **Disorder in pentachloronitrobenzene,  $\text{C}_6\text{Cl}_5\text{NO}_2$ : a diffuse scattering study.** *Acta Crystallogr., Sect. B: Struct. Sci.* (2007), 63(4), 663–673. <http://dx.doi.org/10.1107/S0108768107024305>
127. Tripoli R, Cayzer TN, Willis AC, Sherburn MS, Paddon-Row MN **Stereocontrol of intramolecular Diels–Alder reactions by an allylic diphenylcyclopropyl group.** *Org. Biomol. Chem.* (2007), 5(16), 2606–2616. <http://dx.doi.org/10.1039/b708324f>
128. Varbanova M, Yamaguchi S, Yang Y, McKelvey K, Hanada A, Borochoy R, Yu F, Jikumaru Y, Ross J, Cortes D, Ma CJ, Noel JP, Mander L, Shulaev V, Kamiya Y, Rodermel S, Weiss D, Pichersky E **Methylation of gibberellins by *Arabidopsis* GAMT1 and GAMT2.** *Plant Cell* (2007), 19(1), 32–45. <http://dx.doi.org/10.1105/tpc.106.044602>
129. Verger D, Carr PD, Kwok T, Ollis DL **Crystal structure of the N-terminal domain of the TyrR transcription factor responsible for gene regulation of aromatic amino acid biosynthesis and transport in *Escherichia coli* K12.** *J. Mol. Biol.* (2007), 367(1), 102–112. <http://dx.doi.org/10.1016/j.jmb.2006.12.018>
130. Viau L, Willis AC, Humphrey MG **Ruthenium cluster chemistry: monodentate bis(diphenylphosphino)acetylene-ligated cluster modules in chain and dendrimer formation.** *J. Organomet. Chem.* (2007), 692(10), 2086–2091. <http://dx.doi.org/10.1016/j.jorganchem.2007.01.027>
131. Voss SD, Smith SV, DiBartolo N, McIntosh LJ, Cyr EM, Bonab AA, Dearling JLJ, Carter EA, Fischman AJ, Treves ST, Gillies SD, Sargeson AM, Huston JS, Packard AB **Positron emission tomography (PET) imaging of neuroblastoma and melanoma with  $^{64}\text{Cu}$ -SarAr**

- immunoconjugates.** *Proc. Natl. Acad. Sci. U.S.A.* (2007), 104(44), 17489–17493.  
<http://dx.doi.org/10.1073/pnas.0708436104>
132. Wagler J, Hill AF **Templated rearrangement of silylated benzoxazolin-2-ones: a novel tridentate (ONO)<sup>2-</sup> chelating ligand system.** *Organometallics* (2007), 26(15), 3630–3632.  
<http://dx.doi.org/10.1021/om700416b>
133. Watson M, Liu J-W, Ollis D **Directed evolution of trimethoprim resistance in *Escherichia coli*.** *FEBS J.* (2007), 274(10), 2661–2671. <http://dx.doi.org/10.1111/j.1742-4658.2007.05801.x>
134. Watt SJ, Sheil MM, Beck JL, Prosselkov P, Otting G, Dixon NE **Effect of protein stabilization on charge state distribution in positive- and negative-ion electrospray ionization mass spectra.** *J. Am. Soc. Mass Spectrom.* (2007), 18(9), 1605–1611. <http://dx.doi.org/10.1016/j.jasms.2007.06.004>
135. Watt SJ, Urathamakul T, Schaeffer PM, Williams NK, Sheil MM, Dixon NE, Beck JL **Multiple oligomeric forms of *Escherichia coli* DnaB helicase revealed by electrospray ionisation mass spectrometry.** *Rapid Commun. Mass Spectrom.* (2007), 21(2), 132–140.  
<http://dx.doi.org/10.1002/rcm.2818>
136. Welberry TR, Sing B **Deformed Penrose tilings.** *Philos. Mag.* (2007), 87(18–21), 2877–2886.  
<http://dx.doi.org/10.1080/14786430701364978>
137. Williams SR, Evans DJ **Statistical mechanics of time independent nondissipative nonequilibrium states.** *J. Chem. Phys.* (2007) 127(18), 184101/1–13.  
<http://dx.doi.org/10.1063/1.2780161>
138. Williams SR, Evans DJ, Mittag E **Negative entropy production in oscillatory processes.** *C. R. Phys.* (2007), 8(5–6), 620–624. <http://dx.doi.org/10.1016/j.crhy.2007.05.007>
139. Williams SR, Searles DJ, Evans DJ **Deterministic derivation of non-equilibrium free energy theorems for natural isothermal isobaric systems.** *Mol. Phys.* (2007), 105(8), 1059–1066.  
<http://dx.doi.org/10.1080/00268970701278393>
140. Wilson KF, Goossens DJ **Improving student engagement in 3rd year condensed matter physics: a case study.** In *Proceedings of the 31st Australian Institute of Physics Condensed Matter and Materials Meeting* (2007) Paper #32. [http://www.aip.org.au/wagga2007/2007\\_32.pdf](http://www.aip.org.au/wagga2007/2007_32.pdf)
141. Withers RL, Brink FJ, Liu Y, Norén L **Cluster chemistry in the solid state: structured diffuse scattering, oxide/fluoride ordering and polar behavior in transition metal oxyfluorides.** *Polyhedron* (2007), 26(2), 290–299. <http://dx.doi.org/10.1016/j.poly.2006.05.021>
142. Withers RL, Urones-Garrote E, Otero-Diaz LC **Structured diffuse scattering, local crystal chemistry and metal ion ordering in the (1 – x)MgS • x/3Yb<sub>2</sub>S<sub>3</sub>, 0 ≤ x ≤ ~0.45, ‘defect’ NaCl system.** *Philos. Mag.* (2007), 87(18–21), 2807–2813.  
<http://dx.doi.org/10.1080/14786430601078017>
143. Woodcock HL III, Hodošček M, Gilbert ATB, Gill, PMW, Schaefer HF III, Brooks BR **Interfacing Q-Chem and CHARMM to perform QM/MM reaction path calculations.** *J. Comput. Chem.* (2007), 28(9), 1485–1502. <http://dx.doi.org/10.1002/jcc.20587>
144. Wouterse A, Williams SR, Philipse AP **Effect of particle shape on the density and microstructure of random packings.** *J. Phys.: Condens. Matter* (2007), 19(40), 406215/1–14.  
<http://dx.doi.org/10.1088/0953-8984/19/40/406215>
145. Wu N, Zhu Y, Leech PW, Sexton BA, Brown S, Easton C **Effects of surfactants on the formation of microdroplets in the flow focusing microfluidic device.** In *Proc. SPIE, Vol. 6799 – BioMEMS and Nanotechnology III*. Nicolau DV, Abbott D, Kalantar-Zadeh K, Di Matteo T, Bezrukov SM, eds. SPIE: Bellingham, USA (2007), 67990C/1–8.  
<http://dx.doi.org/10.1117/12.769326>
146. Wu PSC, Ozawa K, Lim SP, Vasudevan SG, Dixon NE, Otting G **Cell-free transcription/translation from PCR-amplified DNA for high-throughput NMR studies.** *Angew. Chem., Int. Ed.* (2007), 46(18), 3356–3358. <http://dx.doi.org/10.1002/anie.200605237>
147. Zhou Q, Kennedy BJ, Elcombe MM, Withers RL **Composition- and temperature-dependent phase transitions in 1:3 ordered perovskites Ba<sub>4-x</sub>Sr<sub>x</sub>NaSb<sub>3</sub>O<sub>12</sub>.** *J. Solid State Chem.* (2007), 180(11), 3082–3092. <http://dx.doi.org/10.1016/j.jssc.2007.09.004>