

## Publications 2000

---

1. ***Towards experimental mapping of the mechanism of heteroborane isomerisation.***  
Contemporary Boron Chemistry M. G. Davidson, A. K. Hughes, T. B. Marder and K. Wade (Eds.) Royal Society of Chemistry, 2000, 329-336  
G Barbera, S Dunn, M A Fox, R M Garrioch, B E Hodson, K S Low, G M Rosair, F Teixidor, C Vinas, A J Welch, A S Weller
2. ***Scanning probe microscopy of CVD diamond films***  
Mikrochem Acta, 2000, 32, 435-441  
Y-c Fan, A G Fitzgerald, P John, C E Troupe, J I B Wilson
3. ***Halonium ion-mediated reaction of unsaturated hydroperoxy acetals. Competition between the formation of cyclic peroxides and the migration of the methoxy (or hydroxy) group***  
J. Org. Chem., 2000, 65, 1069-1075  
T Tokuyasu, A Masuyama, M Nojima, K J McCullough
4. ***Neutron scattering and polymer blends***  
Polymer Blends Volume 1: Formulation and Performance, 2000, 349-378  
D G Bucknall, V Arrighi
5. ***Vacuum ultraviolet spectrum of dinitrogen pentoxide***  
J. Quant. Rad. Spectr., 2000, 64, 67-74  
B A Osborne, G Marston, L Kaminski, N C Jones, J M Gingell, N J Mason, I C Walker, J Delwiche, M-J Huben-Franskin
6. ***Mechanical properties of single-brin silkworm silk***  
J. Appl. Polym. Sci., 2000, 75, 1270-1277  
J J Perez-Rigueiro, C Viney, J Llorca, M Elices
7. ***Electrical resistance curing of carbon-fibre /epoxy composites***  
Composites Science and Technology, 2000, 60, 315-319  
C Joseph, C Viney
8. ***Pyrazine and related ring structures***  
Rodd's Chemistry of Carbon Compounds, 2nd Edition,  
Vol IV, Part IJ, 2nd Supplement, 2000, 99-171

9. *Near-infrared spectroscopy of bromomethylene in a slit-jet expansion*  
J. Mol. Spectrosc., 2000, 202, 131-143  
B C Chang, M L Costen, A J Marr, G Ritchie, G E Hall, T J Sears
10. *Transient frequency modulation absorption spectroscopy of molecules produced in a laser expansion*  
Chem. Phys. Lett., 2000, 319, 363-367  
T C Steimle, M L Costen, G E Hall, T J Sears
11. *Alpha-chloronitroso compounds derived from carbohydrate ketones: Cycloadditions with cyclic dienes, a synthesis of (-)-physoperuvine and a formal synthesis of (+)-epibatidine*  
J. Chem. Soc., Perkin Trans. 1, 2000, 329-343  
A Hall, P D Bailey, D C Rees, G M Rosair, R H Wightman
12. *A substrate template for peptide transporter pepT1*  
Angew. Chem. Int. Ed., 2000, 39, 505-508  
P D Bailey, C A R Boyd, J R Bronk, I D Collier, D Meredith, K M Morgan, C S Temple
13. *State-specific collisional coupling of the  $CH A^2 \Delta$  and  $B^2 \Sigma^-$  states*  
Phys. Chem. Chem. Phys., 2000, 2, 461-471  
C J Randall, C Murray, K G McKendrick
14. *[(NH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>]<sub>0.5</sub>[Sb<sub>7</sub>S<sub>11</sub>]: A new two-dimensional antimony sulfide with antimony-antimony bonding*  
Chem. Mater., 2000, 12, 182-187  
A V Powell, S Boissiere, A M Chippindale
15. *Structural, magnetic and electronic properties of vanadium-substituted nickel chromium sulfide*  
Chem. Mater., 2000, 12, 1034-1041  
P Vaqueiro, M Bold, A V Powell, C Ritter
16. *Theoretical organometallic chemistry*  
RSC Specialist Periodical Report on Organometallic Chemistry, 2000, 28, 1-32  
S A Macgregor
17. *Self-organization of spheroidal molecular assemblies in polar solvents*

Org. Lett., 2000, 2, 29-32

T Grawe, T Schrader, M Gurrath, A Kraft, F Osterod

18. ***Theoretical investigation of the formation of 5-membered metallacycles by the reaction of CO with metallacyclobutenones: differences between Ni and Pt***  
J. Organomet. Chem., 2000, 607, 164-174  
S A Macgregor, E Wenger
19. ***Miscibility of alpha-methyl styrene copolymers - extension of the mean-field treatment for the case of two copolymers***  
Polymer, 2000, 41, 3871-3873  
D Lath, E Lathova, J M G Cowie
20. ***Lyotropic liquid crystalline cellulose derivatives in blends and molecular composites***  
Macromol. Symp., 2000, 152, 107-116  
J M G Cowie, V Arrighi, J Cameron, D Robson
21. ***The influence of solvent on the apparent reactivity ratios in free radical copolymerisation reactions between itaconic acid and 2-hydroxyethyl acrylate***  
European Polymer Journal, 2000, 36, 1795-1803  
J M G Cowie, I J McEwen, D J Yule
22. ***Enthalpy relaxation of styrene-maleic anhydride (SMA) copolymers  
Part 1. Single component systems***  
Polymer, 2000, 41, 7255-7262  
N R Cameron, J M G Cowie, R Ferguson, I McEwen
23. ***Synthesis and characterisation of tetrathiafulvalenyl- and ferrocenyl-triphenylenes***  
Tetrahedron, 2000, 56, 3385-3390  
G Cooke, A Radhi, N Boden, R J Bushby, Z Lu, S Brown, S L Heath
24. ***Recognition and encapsulation of an electroactive guest within a dynamically folded polymer***  
J. Am. Chem. Soc., 2000, 122, 3595-3598  
T H Gallow, F Ilhan, G Cooke, V M Rotello
25. ***The reversible complexation of a tetrathiafulvalene functionalised self-assembled monolayer by cyclobis(paraquat-p-phenylene)***  
Tet. Letts., 2000, 41, 8163-8166  
G Cooke, F M A Duclairoir, V M Rotello, J F Stoddart
26. ***Synthesis of liquid crystalline anthraquinolyl-triphenylenes***  
Tet. Lett., 2000, 41, 7955-7959

27. ***Synthesis and anti-HIV-1 activity of novel bicyclic nucleoside analogues restricted to an S-type conformation***  
J. Chem. Soc., Perkin Trans. 1, 2000, 2903-2906  
L Kvaerno, C Nielsen, R H Wightman
28. ***Synthesis of aza-C-disaccharides using cycloaddition reactions of a functionalized cyclic nitron***  
Chem. Commun., 2000, 2127-2128  
F J Duff, V Vivien, G M Rosair, R H Wightman
29. ***Antibiotics***  
Carbohydrate Chemistry (Specialist Periodical Report), 2000, 31, 254-266  
R H Wightman
30. ***An unexpected electronic preference for transfer of a beta-hydrogen trans to a metal-hydride bond***  
New J. Chem., 2000, 24, 855-858  
S A Macgregor, B Sweeney
31. ***The observation of local order in poly(di-n-alkyl itaconate)s***  
Macromolecules, 2000, 33, 4989-4991  
V Arrighi, A Triolo, I J McEwen, P Holmes, R Triolo, H Amenitsch
32. ***QENS from polymer aggregates in supercritical CO<sub>2</sub>***  
Physica B: Physics of Condensed Matter, 2000, 276-278, 386-387  
R Triolo, V Arrighi, A Triolo, P Migliardo, S Magazu, J B McClain, D Betts, J M DeSimone, H D Middendorf
33. ***Short range order in blends of polycarbonates with polystyrenes***  
Physica B: Physics of Condensed Matter, 2000, 276-278, 849-851  
V Arrighi, W Zajac, S Shenoy, D Martin y Marero, B J Gabrys, M T Garay, S Gagliardi, K H Andersen
34. ***Modelling and experimental investigation into the ballistic behaviour of an ultra high molecular weight polyethylene /thermoplastic rubber matrix composite***  
Proceedings of the 12th International Conference on Composite Materials (ICCM-12, Paris, July 1999), 2000, Paper 915 (10 pages)  
N Sharma, D Carr, P Kelly, C Viney

35. ***Evaluating the silk/epoxy interface by means of the Microbond Test***  
Composites Part A: Applied Science and Manufacturing, 2000, 31, 653-660  
J P Craven, R Cripps, C Viney
36. ***Biological fibrous materials: self-assembled structures and optimised properties***  
Structural Biological Materials (Edited by M. Elices),  
Pergamon / Elsevier Science, Oxford, 2000, 221-267  
E Renuart, C Viney
37. ***Silk fibres: origins, nature and consequences of structure***  
Structural Biological Materials (Edited by M. Elices),  
Pergamon / Elsevier Science, Oxford, 2000, 293-333  
C Viney
38. ***Characterisation of spider (araneus diadematus) cocoon silk fibres***  
Proceedings of the 12th European Congress on Electron Microscopy  
(EUREM vol. 1: Biological Sciences, edited by S. Cech and R. Janisch),  
Czechoslovak Society for Electron Microscopy, 2000, 509-510  
J Y J Barghout, C Viney, J T Czernuszka
39. ***Mechanical properties of silkworm silk in liquid media***  
Polymer, 2000, 41, 8433-8439  
J J Perez-Rigueiro, C Viney, J Llorca, M Elices
40. ***Packing of spheres around rods in supramolecular aggregates***  
European Journal of Physics, 2000, 21, 609-615  
F Gray, C Viney
41. ***Synthesis of 1,3-diynes in the purine, pyrimidine, 1,3,5-triazine and acridine Series***  
Tetrahedron, 2000, 56, 1233-1245  
W E Lindsell, C Murray, P N Preston, T J Woodman
42. ***Macroscopic helical and cylindrical morphologies from achiral 1,3-diynes***  
Chem. Mater., 2000, 12, 1572-1576  
W E Lindsell, P N Preston, J M Seddon, G M Rosair, T J Woodman
43. ***A novel STM-based depth profiling technique for the electronic characterisation of thin film materials***  
Applied Surface Science, 2000, 162-163, 630-637  
Y-c Fan, A G Fitzgerald, J A Cairns, P John, C E Troupe
44. ***Study of the interface microstructure of CVD diamond films by TEM***

Mikrochemica Acta, 2000, 132, 315-321

A G Fitzgerald, Y-c Fan, P John, C E Troupe, J I B Wilson, A O Tooke, B E Storey

45. ***1,2-Ph<sub>2</sub>-9-I-1,2-closo-C<sub>2</sub>B<sub>10</sub>H<sub>9</sub>***

Acta Crystallogr., 2000, C56, 487-488

T D McGrath, M A Fox, A J Welch

46. ***A three-dimensional network of cadmium***

Acta Crystallogr., 2000, C56, 146-148

G Mostafa, A Mondal, I R Laskar, A J Welch, N Ray Chaudhuri

47. ***Supramolecular liquid crystals with columnar mesophases through self-assembly of carboxylic acids around a tribasic core***

Chem. Commun., 2000, 1015-1016

A Kraft, A Reichert, R Kleppinger

48. ***Self-organized ball-shaped molecular assemblies in water***

J. Phys. Org. Chem., 2000, 13, 670-673

T Grawe, T Schrader, M Gurrath, A Kraft, F Osterod

49. ***Synthesis, crystal structure and antimalarial activity of functionalized spiro-1,2,4,5-tetraoxacycloalkanes from unsaturated hydroperoxy peracetals***

Tetrahedron Letters, 2000, 41, 4681-4684

Y Nonami, T Tokuyasu, A Masuyama, M Nojima, K J McCullough, H S Kim, Y Wataya

50. ***Methyl-substituted dispiro-1,2,4,5-tetraoxanes: Correlations of structural studies with antimalarial activity***

Journal of Medicinal Chemistry, 2000, 43, 1246-1249

K J McCullough, J K Wood, A K Bhattacharjee, Y X Dong, D E Kyle, W K Milhous, J L Vennerstrom

51. ***Order-disorder transitions in NiCr<sub>2</sub>S<sub>4</sub>***

Physica B, 2000, 276-278, 238-239

P Vaqueiro, A V Powell, B Lebech

52. ***Novel intercalation compounds of MoS<sub>2</sub>***

Mol. Cryst. & Liq. Cryst., 2000, 341, 125-130

A V Powell, L Kosidowski, A McDowall

53. ***Structures and properties of new ordered defect phases in the vanadium chromium sulfide system***

Chem. Mater., 2000, 12, 2705-2714  
P Vaqueiro, A V Powell

54. ***Phase behaviour, magnetic and electronic properties in the series  $\text{Co}_{(1-x)}\text{Ni}_x\text{Cr}_2\text{S}_4$  ( $0 < x < 1$ )***  
J. Mater. Chem., 2000, 10, 2381-2387  
P Vaqueiro, S Sommer, A V Powell
55. ***A new mixed-valent copper-antimony sulfide:  $[\text{H}_2\text{NCH}_2\text{CH}_2\text{NH}_2]_{0.5}[\text{Cu}_2\text{SbS}_3]$***   
J. Chem. Soc., Dalton Trans., 2000, 4192-4195  
A V Powell, S Boissiere, A M Chippindale
56. ***Polymer blends***  
Applications of Neutron Scattering to Soft Condensed Matter,  
Edited by Barbara J Gabrys, Gordon and Breach Science Publishers, 2000, 227-266  
V Arrighi, J S Higgins
57. ***7,8-Diphenyl-9-dimethylsulphido-10,11-m-hydro-7,8-dicarbano-undecaborane(9)***  
Acta Crystallogr., 2000, C56, 1399-1400  
D Ellis, G M Rosair, S Robertson, A J Welch
58. ***Synthesis, characterisation of triamine complexes of nickel(II)selenocyanate and their thermally induced dimerization: X-ray single crystal structures of  $[\text{Ni}(\text{dpt})(\text{SeCN})_2(\text{H}_2\text{O})]$  and  $[\text{Ni}(\text{aepn})(\text{SeCN})_2(\text{H}_2\text{O})]$***   
Polyhedron, 2000, 19, 1093-1097  
T K Maji, G Mostafa, P S Mukherjee, A Mondal, A J Welch, K Okamoto, N Ray Chaudhuri
59. ***Closo and semipseudocloso forms of the same carbametallaborane: synthesis and spectroscopic and crystallographic characterisation of 1-CCPh-2-Ph-3-( $\mu$ -L)-3,1,2-RhC<sub>2</sub>B<sub>9</sub>H<sub>9</sub> (L = C<sub>5</sub>H<sub>5</sub>)***  
J. Organometal. Chem., 2000, 614-615, 153-157  
R M Garrioch, G M Rosair, A J Welch
60. ***Rotational state-resolved coupling of CH A<sup>2</sup>  $\Delta$  and B<sup>2</sup>  $\Sigma^-$  in collisions with CO<sub>2</sub>***  
Phys. Chem. Chem. Phys., 2000, 2, 5553-5558  
C Murray, C J Randall, K G McKendrick
61. ***Electronic excitation and oscillator strength of ethyl bromide by VUV photoabsorption and electron energy-loss spectroscopy***  
J. Chem. Phys., 2000, 112, 6285-6292  
A Guilianì, F Motte-Tollet, J Delwiche, N J Mason, N C Jones, J M Gingell,

62. ***Symmetry-breaking collisional energy transfer in the 4v(CH) rovibrational manifold of acetylene: spectroscopic evidence of a quasi-continuum of background states***  
Chem. Phys. Lett., 2000, 324, 48-56  
M A Payne, A P Milce, M J Frost, B J Orr
63. ***State correlations in the unimolecular dissociation of ketene***  
J. Phys. Chem. A, 2000, 104, 10247-10258  
M L Costen, H Katayanagi, G E Hall
64. ***An unusual oxidative rearrangement of azabicyclo[2.2.1]heptenes, providing a stereoselective route to 2'- and 3'-hydroxycyclopentylglycines***  
Chem. Commun., 2000, 2451-2452  
P D Bailey, I M McDonald, G M Rosair, D Taylor
65. ***Chiro-optical properties of lyotropic ethyl cellulose derivatives***  
Polymer, 2000, 42, 1297-1301  
J C Thies, J M G Cowie
66. ***The dynamics of reactions of O(3P) atoms with saturated hydrocarbons and compounds***  
Progress in Reaction Kinetics and Mechanism, 2000, 25, 299-370  
F Ausfelder, K G McKendrick
67. ***Vector correlations in the 355nm photodissociation of thermal NO<sub>2</sub>***  
Phys. Chem. Chem. Phys., 2000, 2, 661-664  
R P Baker, M L Costen, G Hancock, G A D Ritchie
68. ***Reactions of 1,2- and 1,3-dimethoxy- and 1,3,5-trimethoxybenzene with nitrogen dioxide/dinitrogen tetroxide in dichloromethane***  
J. Chem. Res. Synop., 2000, 6, 276-277  
B G Gowenlock, B King, J Pfab
69. ***The first thermally-stable singly oxo-bridged dinuclear Ni(III) complex***  
Chem. Commun., 2000, 1729-1730  
B Bag, S Mitra, A Mondal, G Rosair
70. ***Nucleosides***  
Carbohydrate Chemistry (Specialist Periodical Report), 2000, 31, 267-311  
R H Wightman



71. ***Advanced Materials Highlights***  
Chem. Ind., 2000, 111-112  
A Kraft
72. ***Advanced Materials Highlights***  
Chem. Ind., 2000, 258-259  
A Kraft
73. ***Advanced Materials Highlights***  
Chem. Ind., 2000, 504-505  
A Kraft
74. ***Advanced Materials Highlights***  
Chem. Ind., 2000, 578-579  
A Kraft
75. ***Advanced Materials Highlights***  
Chem. Ind., 2000, 647-649  
A Kraft
76. ***Advanced Materials Highlights***  
Chem. Ind., 2000, 787-788  
A Kraft
77. ***Modified amino acids and peptides as substrates for the intestinal peptide transporter PepT1***  
Eur. J. Biochem., 2000, 267, 3723-3728  
D Meredith, C S Temple, N Guha, C J Sword, C A R Boyd, I D Collier,  
K M Morgan and P D Bailey
78. ***New asymmetric routes to ajmaline and suaveoline indole alkaloids***  
J. Chem. Soc., Perkin Trans. 1, 2000, 3566-3577  
P D Bailey, K M Morgan, D I Smith and J M Vernon
79. ***The total synthesis of (-)-suaveoline***  
J. Chem. Soc., Perkin Trans. 1, 2000, 3578-3583  
P D Bailey and K M Morgan
80. ***Mixed Mode Delivery (MMD) of MChem modules***  
Proceedings of "Variety in Chemistry Teaching 2000",  
T L Overton (ed.), p31, RSC, 2000  
P D Bailey and D R Adams

81. *Nyholm feature article*  
J. Chem. Soc., Perkin Trans. 1, 2000, ix-x.  
P D Bailey
  
82. *From Natural Silks to New Polymer Fibres*  
J. Textile Inst., 2000, 91(3), 2-23.  
C Viney