

# Publications 1999

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1. **Nitric Oxide: Physiological Roles, Biosynthesis and Medical Uses**  
Fortschritte der Chemie organischer Naturstoffe, 1999, 76, 1-211  
D R Adams, M Brochwicz-Lewinski, A R Butler
2. **Quasielastic neutron scattering study of poly(dimethyl siloxane) at high pressure**  
Phys. Chem., 1999, 1, 137-141  
J E Roots, K T Ma, J S Higgins, V Arrighi
3. **A photo-absorption and mass-spectrometry study of pyrrole**  
Chemical Physics, 1999, 250, 217-236  
E E Rennie, C A F Johnson, J E Parker, R Ferguson, D M P Holland, D A Shaw
4. **Dissociative Electron Transfer during Laser Desorption on Anthracene Picrate**  
J. Phys. Chem. A, 1999, 103, 6887-6890  
S M Hankin, P John
5. **Modern Techniques for Polymer Characterisation**  
John Wiley and Sons Ltd., 1999, 141-170  
V Arrighi
6. **Novel Single Ion, Comb-Branched Polymer Electrolytes**  
Solid State Ionics, 1999, 123, 233-242  
J M G Cowie, G H Spence
7. **Microscopic Cluster Formation during the Laser Desorption of Chrysene-d<sub>12</sub>**  
J. Phys. Chem. B., 1999, 103, 4566-4569  
S M Hankin, P John
8. **Microstructural Studies of CVD Diamond Films by Transmission Electron Microscopy**  
Proc EMAG'e;99  
A G Fitzgerald, Y-C Fan, P John, C E Troupe, J I B Wilson
9. **Syntheses and Structures of Six and Seven Co-ordinate Diene Complexes of Molybdenum and Tungsten (II). The Crystal and Molecular Structures of [WBr<sub>2</sub>(CO)<sub>2</sub>(PMePh<sub>2</sub>)  
(Norbornadiene)] and [WBr<sub>2</sub>(CO)(N=CCH=CH<sub>2</sub>)(Norbornadiene)]**

J. Organometal. Chem., 1999, 592/2, 168-179  
J L Davidson, H Richtzenhein, B J S Thiebaut, G M Rosair

10. ***Reactions of Alkynes with Molybdenum and Tungsten Bis (alkyne) Complexes [M(SR)(CF<sub>3</sub>C=CCF<sub>3</sub>)<sub>2</sub>(n<sup>5</sup>-C<sub>5</sub>H<sub>5</sub>)] (M = Mo, R = C<sub>6</sub>F<sub>5</sub>; M = W, R = C<sub>6</sub>H<sub>4</sub>Me-4): The Crystal and Molecular Structure of [Mo{ n<sup>5</sup>-C(CF<sub>3</sub>)=C(CF<sub>3</sub>)C(CO<sub>2</sub>Me)C(CO<sub>2</sub>Me)(SC<sub>6</sub>F<sub>5</sub>)}(CF<sub>3</sub>C=CCF<sub>3</sub>)***  
J. Chem. Soc. Dalton Trans., 1999, , 3883  
N M Agh-Atabay, J L Davidson, U Dullweber, G Douglas, K W Muir
11. ***A Theoretical Study of the Electronic Structure of Group 6 [M(CO)<sub>5</sub>X]- Species (X = NH<sub>2</sub>, OH, Halide, H, CH<sub>3</sub>) and a Reinvestigation of the Role of pi-Donation in CO Lability***  
Inorganic Chemistry, 1999, 38, 4868-4876  
S A Macgregor, D MacQueen
12. ***Preparation of 1,2,4-triazoloquinazolinium betaines and molecular rearrangements of putative 1,2,4-triazolo [4,3-a][1,3,5] triazinium betaines***  
J. Chem. Soc. Perkin Trans. 1, 1999, , 1517-1525  
D L Crabb, K J McCullough, P N Preston, G M Rosair, B C Bishop, S H B Wright, S J Teat
13. ***Ozonolyses of 3-Benzoyloxy- and 3-Trimethylsiloxy-Substituted 2-Phenylindenes in Methanol: Substituent-Dependent Modes of Capture of the Carbonyl Oxide Intermediates by the Solvent***  
J. Org. Chem., 1999, 64, 2137-2139  
K J McCullough, R Takeuchi, A Masuyama, M Nojima
14. ***2-Benzyl-2-hydroxycyclohexanone***  
Acta Crystallogr., 1999, C55, 268-270  
K J McCullough, G M Rosair
15. ***Synthetic methods for unsymmetrically-substituted 1,2,4,5-tetroxanes and of 1,2,4,5,7-pentoxocanes***  
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H S Kim, K Tsuchiya, Y Shibata, Y Wataya, Y Ushigoe, A Masuyama, M Nojima, K J McCullough
16. ***Synthesis, crystal structure and anti-malarial activity of novel spiro-1,2,4,5-tetraoxacycloalkanes***  
Tetrahedron Letters, 1999, 40, 4077-4080  
K Tsuchiya, Y Hamada, A Masuyama, M Nojima, K J McCullough, H S Kim, Y Shibata, Y Wataya
17. ***The electronic states of thiophene studied by optical (VUV) absorption, near-threshold electron***

*energy-loss spectroscopy and ab initio multi-reference configuration interaction studies*

J. Chem. Phys., 1999, 121, 275-296

M H Palmer, I C Walker, M F Guest

18. *Electronic excitation and oscillator strength of ethyl iodide by VUV photabsorption and electron energy-loss spectroscopy*  
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19. *On the electronic structure of [Pt(4,4<sup>1</sup>-X<sub>2</sub>-bipy)Cl<sub>2</sub>] (0/-2-): an electrochemical and spectroscopic (UV/Vis, EPR, ENDOR) study*  
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20. *The length of cooperativity at the glass transition in poly(vinyl acetate) from the modeling of the structural relaxation process*  
Polymer, 1999, 40, 183-192  
J L G Ribelles, A V Garayo, J M G Cowie, R Ferguson, S Harris, I J McEwen
21. *Molecular order in spider major ampullate silk (dragline): effects of spinning rate and post-spin drawing*  
J. Appl. Polym. Sci., 1999, 72, 895-903  
S Carmichael, C Viney
22. *Influencia del medio en las propiedades mecanicas de la seda*  
Anales de Mechanica de la Fractura, 1999, 16, 430-434  
J J Perez-Rigueiro, C Viney, J Llorca, M Elices
23. *Spider (*Araneus diadematus*) Cocoon Silk: a Case of Non-Periodic Lattice Crystals with a Twist?*  
Int. J. Biol. Macromol., 1999, 24, 211-217  
J Y J Barghout, B L Thiel, C Viney
24. *The Effect of Post-Spin Drawing on Spider Silk Microstructure: a Birefringence Model*  
Int. J. Biol. Macromol., 1999, 24, 219-226  
S Carmichael, J Y J Barghout, C Viney
25. *Gel Electrophoresis of Biological Macromolecules*  
Modern Techniques for Polymer Characterisation, John Wiley and Sons, Chichester, 1999, 287-315  
C Viney, L K Gilliland

26. **New Materials Biotechnology: The Science and the Business (2nd Edition)**  
Harwood Academic Publishers, Amsterdam, 1999, 351-366  
D Brown, C Viney
27. **High Temperature Neutron Diffraction Studies of Phase Transformations in NiCr<sub>2</sub>S<sub>4</sub>**  
J. Mater. Chem., 1999, 9, 2859-2863  
P Vaqueiro, S Hull, B Lebech, A V Powell
28. **Synthesis and Nonlinear Optical Properties of Functionalised Polydiacetylenes and their Complexes with Transition Metals**  
J. Mater. Chem., 1999, 9, 1251-1256  
M A Camacho, A K Kar, W E Lindsell, C Murray, P N Preston, B S Wherrett
29. **Synthesis and reactions of [1,2,4]triazolo[1,5-a]pyrimidinium-2-aminides**  
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B C Bishop, H Marley, P N Preston, S H B Wright
30. **Glass Transition and Structural Relaxation in Polystyrene/Poly(2,6-dimethyl-1,4-phenylene oxide) Miscible Blends**  
Macromolecules, 1999, 32, 4430-4438  
J M G Cowie, S Harris, J L G Ribelles, J M Meseguer, F Romero, C Torregrosa
31. **Molecular Dynamics of Main-Chain Liquid Crystalline Polymers**  
Physica B Condensed Matter, 1999, 266, 1-12  
V Arrighi, J S Higgins, S Mani, L Stoeber
32. **Miscibility and Relaxation Processes in Blends**  
Polymer Blends and Alloys, Marcel Dekker Inc., New York, 1999, 81-124  
J M G Cowie, V Arrighi
33. **Application of the NOE experiment to the analysis of boron hydride derivatives: confirming the assignments of the pseudoccloso-complex [1,2-Ph<sub>2</sub>-3-{Cp}-3,1,2-IrC<sub>2</sub>B<sub>9</sub>H<sub>9</sub>] (Cp = n-C<sub>5</sub>Me<sub>5</sub>) and the closo-compounds 1-Ph-1,2-C<sub>2</sub>B<sub>10</sub>H<sub>11</sub> and 1-Ph-2-Me-1,2-C<sub>2</sub>B<sub>10</sub>H<sub>10</sub>**  
Inorg. Chim. Acta, 1999, 289, 125-133  
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34. **Building a Picture of Heteroborane Isomerisation: Synthesis & Characterisation of the 10-(Dialkylsulfane)-7,8-diphenyl-7,8-dicarba-nido-undecaboranes 7,8-Ph<sub>2</sub>-10-L-7,8-nido-C<sub>2</sub>B<sub>9</sub>H<sub>10</sub> (L=SMe<sub>2</sub>,SMeEt,SEt<sub>2</sub>) & arising Intermediate and Isomerised Products**  
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35. *Synthesis and Reactivity of Dinuclear Complexes containing  $n^2$ -Phenyl-Metal Interactions. Crystal Structures of  $[NBu_4][C_6F_5)_3Pt\{u-Ph_2PCH_2PPh(n_2-Ph)\}Pt(C_6F_5)_2]$  and  $[NBu_4][C_6F_5)_3Pt(u-dppm)Pt(C_6F_5)_2(CO)$*   
Inorg. Chem., 1999, 38, 1529-1534  
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36. *The "1,2 to 1,2" Cage Carbon Isomerisation in Bisphosphine Carbanickelaboranes: Syn., Spectro. & Crystallog. Character. of 1,2- $Ph_2$ -4,4-( $PM_2Ph$ ) $_2$ -4,1,2-closo- $NiC_2B_2H_9$ , 1,2- $Ph_2$ -4,4-( $PEt_3$ ) $_2$ -4,1,2-closo- $NiC_2B_2H_9$  and 1,2- $Ph_2$ -4-( $dppe$ )-4,1,2-closo- $NiC_2B_2H_9$*   
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37. *First examples of  $n^5$ -bonding of a carbaborylphosphine ligand to transition metals. Synthesis & Characterisation of 7-{ $PPh_2AuPPh_3$ }-8- $Ph$ -7,8-nido- $C_2B_2H_{10}$ , 1-{ $PPh_2AuCl$ }-2- $Ph$ -3-(*p*-cymene)-3,1,2-pseudoccloso- $RuC_2B_2H_9$  & 1-{ $PPh_2AuCl$ }-2- $Ph$ -3-(*n*- $C_5Me_5$ )-3,1,2-pseudoccloso- $RhC_2B_2H_9$*   
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38. *Miscibility of Polymer Blends of Poly(styrene-co-4-hydroxystyrene) with Bisphenol-A-Polycarbonate*  
J. Appl. Polym. Sci., 1999, 74, 639-646  
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40. *Communicating Chemistry: A Teaching Manual for University Teachers*  
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41. *Swern Oxidation of Tryptamine Derivatives*  
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42. *Synthesis of Polycyclic Indole Structures*  
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45. ***Unusual Biomimetic Oxidations of Indoles: Synthesis of Suaveoline and an Alkaloid G Analogue***  
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46. ***Magnetic Structure and Spin Reorientation in the Ternary Sulfides  $Ni_xCr_{3-x}S_4$  ( $x = 0.25, 0.5, 0.75$ )***  
J. Solid State Chem., 1999, 143, 163-173  
A V Powell, D C Colgan, C Ritter
47. ***The electronic states of cyclopropane studied by (VUV) absorption and electron energy-loss***  
Journal of Physics.B: Atomic and Molecular Physics, 1999, 32, 2729-2744  
J M Gingell, N J Mason, I C Walker, G Marston, H Zhao, M R F Siggel
48. ***Dissociative electron attachment to  $CF_2Cl_2$***   
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49. ***Laser Time-of Flight Mass Analysis of PAHs on Single Diesel Particulates***  
Analytical Chemistry, 1999, 71, 1100-1104  
S M Hankin, P John
50. ***Efficient use of trimethylsulfonium methylsulfate as a reagent for the epoxidation of carbonyl-containing compounds***  
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51. ***Blends of rigid and flexible macromolecules: poly(benzimidazole) mixed with poly(vinyl acetate-stat-vinyl alcohol) copolymers***  
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55. *Structural Distortions and the Insulator to Metal transition in NiCr<sub>2-x</sub>V<sub>x</sub>S<sub>4</sub>*

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58. *Haloaryl carbaboranes 2. Synthesis and characterisation of haloaryl-closo-carbaboranes.*

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60. *Stability of Molecular Order in Silkworm Silk*

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63. ***Branched non-covalent complexes between carboxylic acids and two tris(amidines)***  
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66. ***Non-covalent complexes from various acidic heterocycles and trifunctional amidine bases***  
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