

**Dr. Sarah L. Masters**  
 Department of Chemistry  
 University of Canterbury  
 Private Bag 4800, Christchurch, 8140  
 New Zealand

Telephone: (+64) 3 364 2456  
 Telefax: (+64) 3 364 2110  
 E-Mail: sarah.masters@canterbury.ac.nz  
 Homepage: <http://www.chem.canterbury.ac.nz/people/masters.shtml>

<b>C<sub>2</sub>F<sub>6</sub>O<sub>2</sub>S<sub>2</sub></b> CF <sub>3</sub> SO <sub>2</sub> SCF <sub>3</sub>	<b>Trifluoromethanesulfonothioic acid trifluoromethyl ester</b> Structure by GED and ab initio calculations S. L. Masters, D. A. Wann, H. E. Robertson, D. W. H. Rankin, A. Ben Altabef <i>et al.</i> Manuscript in preparation
<b>C<sub>2</sub>H<sub>2</sub>O</b> C(H <sub>2</sub> )CO	<b>Ketene</b> Structure by VHT-GED generation of pyrolysis products S. J. Atkinson, R. Noble-Eddy, and S. L. Masters Manuscript submitted to J. Phys. Chem. A
<b>C<sub>2</sub>H<sub>4</sub>O<sub>2</sub></b> CH <sub>3</sub> C(O)OH	<b>Acetic Acid</b> Structure by VHT-GED generation of pyrolysis products S. J. Atkinson, R. Noble-Eddy, and S. L. Masters Manuscript submitted to J. Phys. Chem. A
<b>C<sub>3</sub>H<sub>6</sub>Cl<sub>3</sub>N</b> N(CH <sub>2</sub> Cl) <sub>3</sub>	<b>Tris(chloromethyl)amine</b> Structure by GED, Raman Spectroscopy and Computational Methods S. J. Atkinson, N. W. Mitzel, M. Waterland, D. A. Wann, and S. L. Masters Manuscript in preparation
<b>C<sub>4</sub>H<sub>6</sub>O<sub>3</sub></b> CH <sub>3</sub> C(O)OC(O)CH <sub>3</sub>	<b>Acetic anhydride</b> Structure by VHT-GED S. J. Atkinson, R. Noble-Eddy, and S. L. Masters Manuscript submitted to J. Phys. Chem. A
<b>C<sub>6</sub>H<sub>8</sub>O<sub>4</sub></b>	<b>2,2-Dimethyl-1,3-dioxane-4,6-dione (Meldrum's Acid)</b> Structure by GED and ab initio calculations S. J. Atkinson and S. L. Masters Manuscript in preparation
<b>C<sub>6</sub>H<sub>12</sub>F<sub>6</sub>Si<sub>2</sub></b> CF <sub>3</sub> Me <sub>2</sub> SiSiMe <sub>2</sub> CF <sub>3</sub>	<b>1,2-Bis(trifluoromethyl)-1,1,2-tetramethyldisilane</b> Structure by ED, X-ray diffraction and ab initio calculations, interpretation of Raman spectra S. L. Masters, H. E. Robertson, D. A. Wann, M. Hölbling, K. Hassler, R. Bjornsson, S. Ó. Wallevik, and I. Arnason J. Phys. Chem. A, <b>119</b> (2015) 1600
<b>C<sub>7</sub>H<sub>16</sub>Cl<sub>3</sub>PSi</b> (tBu)iPr)PSiCl <sub>3</sub>	<b>(Tert-butyl)(iso-propyl)(trichlorosilyl)phosphine</b> Structure by GED and ab initio calculations C. O. Burn, E. Seppälä, H. E. Robertson W.-W. du Mont, and S. L. Masters Manuscript in preparation
<b>C<sub>11</sub>H<sub>30</sub>Br<sub>2</sub>Si<sub>4</sub></b> C(SiMe <sub>3</sub> ) <sub>2</sub> (SiMe <sub>2</sub> Br) <sub>2</sub>	<b>Bis(bromodimethylsilyl)bis(trimethylsilyl)methane</b> Structure by ED and computational methods D. A. Wann, M. S. Robinson, K. Bätz, S. L. Masters, A. G. Avent, and P. D. Lickiss J. Phys. Chem. A, <b>119</b> (2015) 786
<b>C<sub>11</sub>H<sub>30</sub>Cl<sub>2</sub>Si<sub>4</sub></b> (Me <sub>3</sub> Si) <sub>2</sub> C(SiClMe <sub>2</sub> ) <sub>2</sub>	<b>Bis(chlorodimethylsilyl)bis(trimethylsilyl)methane</b> Structure by ED and computational methods D. A. Wann, M. S. Robinson, K. Bätz, S. L. Masters, A. G. Avent, and P. D. Lickiss

	J. Phys. Chem. A, <b>119</b> (2015) 786
<b>C<sub>11</sub>H<sub>32</sub>Si<sub>4</sub></b> C(SiMe <sub>3</sub> ) <sub>2</sub> (SiMe <sub>2</sub> H) <sub>2</sub>	<b>Bis(dimethylsilyl)bis(trimethylsilyl)methane</b> Structure by ED and computational methods <i>D. A. Wann, M. S. Robinson, K. Bätz, S. L. Masters, A. G. Avent, and P. D. Lickiss</i> J. Phys. Chem. A, <b>119</b> (2015) 786
<b>C<sub>12</sub>H<sub>36</sub>P<sub>2</sub>Si<sub>4</sub></b> P <sub>2</sub> (SiMe <sub>3</sub> ) <sub>4</sub>	<b>1,1,2,2-Tetrakis(trimethylsilyl)diphosphane</b> Structure by GED, UCONGA and ab initio / DFT methods <i>A. P. Flanagan, H. Humphrey-Taylor, N. R. Gunby, H. E. Robertson, and S. L. Masters</i> Manuscript complete
<b>C<sub>14</sub>H<sub>14</sub>O<sub>2</sub>S</b> (C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> ) <sub>2</sub> SO <sub>2</sub>	<b>Dibenzyl sulfone</b> Structure by GED and ab initio / DFT methods <i>R. Noble-Eddy, B. H. C. Wilson, and S. L. Masters</i> Manuscript in preparation
<b>C<sub>18</sub>H<sub>54</sub>Si<sub>8</sub></b> Si <sub>2</sub> (SiMe <sub>3</sub> ) <sub>6</sub>	<b>Hexakis(trimethylsilyl)disilane</b> Vibrational spectra and structure by GED and ab initio calculations <i>K. Hassler, H. E. Robertson, S. L. Masters et al.</i> Manuscript in preparation
	<b>Apparatus development</b> York time-averaged electron diffractometer  <i>M. H. P. Ardebili, R. S. Fender, M. A. D. Fluendy, S. A. Hayes, P. D. Lane, S. L. Masters, R. J. Mawhorter, J. P. F. Nunes, P. Papatomas, D. W. H. Rankin, C. D. Rankine, D. A. Wann, and S. Young</i> Manuscript in preparation