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Appendix 1A: 1H NMR spectrum (CDCl3) of compounds **1a** and **1b**.



Appendix 2A: 13C NMR spectrum (CDCl3) of compounds **1a** and **1b**.



Appendix 1C: DEPT-135 spectrum (CDCl3) of compounds **1a** and **1b**.



Appendix 2A: 1H NMR spectrum (CDCl3) of compound **2**.



Appendix 2B: 1H-1H COSY spectrum (CDCl3) of compound **2**.



Appendix 2C: 13C NMR spectrum (CDCl3) of compound **2**.



Appendix 3A:1H NMR spectrum (CDCl3) of compound **3**.



Appendix: 3B: 1H-1H COSY spectrum (CDCl3) of compound **3**.



Appendix 3C; 13C NMR spectrum (CDCl3) of compound **3**.

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Appendix 3D: DEPT-135 spectrum (CDCl3) of compound **3**.

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Appendix 4A: 1H NMR spectrum (MeOD) of compound **4**.

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 Appendix 4B: 1H-1H COSY spectrum (MeOD) of compound **4**.

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Appendix 4C: 13C NMR spectrum (MeOD) of compound **4**.

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Appendix 4D: DEPT-135 spectrum (MeOD) of compound **4**.

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Appendix: 5A: 1H NMR spectrum (CDCl3) compound **5**.

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Appendix 5B: 13 C NMR spectrum (CDCl3) of compound **5**.



Appendix 5C: DEPT-135 spectrum (CDCl3) of compound **5**.

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Appendix 6A: 1H NMR spectrum (CDCl3) of compound **6**.

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Appendix 6B: 1H-1H COSY spectrum (CDCl3) of compound **6**.

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Appendix 6C: 13C NMR spectrum (CDCl3) of compound **6**.

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Appendix 6D:13C NMR spectrum (CDCl3) of compound **6**.

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