

**List of Abstracts for National and International Conferences - Talks and Posters
(Invited in Bold Print)**

- 1) Petro, W.L., Geiger, C.A. and Guidotti, C.V., 1982, Mineralogy and metamorphism of pelitic rocks, Wisconsin (abs.). Institute of Lake Superior Geology, 28th Annual Meeting, International Falls, Minnesota.
- 2) Geiger, C.A., Guidotti, C.V. and Petro, W.L., 1983, Metamorphism of the Waterloo Quartzite and tectonic implications (abs.). Regional North-Central GSA Meeting, Madison, Wisconsin.
- 3) Geiger, C.A., Newton, R.C. and Kleppa, O.J. and Brousse, C., 1985, Thermochemistry of synthetic almandine-grossular garnet (abs.). EOS, Annual AGU Spring Meeting, Baltimore, Maryland.
- 4) Geiger, C.A., Newton, R.C. and Kleppa, O.J., 1986, Thermochemistry of synthetic pyrope-almandine garnet (abs.). EOS Annual AGU Spring Meeting, Baltimore, Maryland.
- 5) Newton, R.C., Geiger, C.A., Kleppa, O.J. and Brousse, C., 1986, Thermochemistry of binary and ternary garnet solid solutions (abs.). Invited talk, 14th Annual General IMA Meeting, Stanford, CA.
- 6) Geiger, C.A. and Guidotti, C.V., 1986, Precambrian metamorphism in the Southern Lake Superior region: A geothermometry and geobarometry study (abs.). Institute of Lake Superior Geology, 32nd Annual Meeting, Wisconsin Rapids, WI.
- 7) Peterson, J.W. and Geiger, C.A., 1987, The Harwood Gneiss. A basic two-pyroxene granulite (abs.). Institute of Lake Superior Geology, 33rd Annual Meeting, Wawa, Ontario, Canada.
- 8) Geiger, C.A., Newton, R.C. and Kleppa, O.J., 1987, Thermodynamics of synthetic almandine-pyrope and almandine-grossular garnet (abs.). European Union of Geosciences, IVth Annual Meeting, Strasbourg, France.
- 9) Geiger, C.A. and Langer, K., 1987, Synthesis, characterization and physical properties of end-member garnets in the system $(\text{Ca,Fe,Mg,Mn})_3\text{Al}_2\text{Si}_3\text{O}_{12}$ (abs.). European High Pressure Research Group, XXVth Annual Meeting, International Conference, Potsdam, GDR.
- 10) Geiger, C.A., Winkler, B. and Langer, K., 1987, Infrared spectra of synthetic garnets: Evidence of equivalent site behaviour (abs.). Mineralogical Society of Great Britain, 1st Winter Conference, Birmingham, U. K.
- 11) Geiger, C.A., Kleppa, O.J., Mysen, B.O., Lattimer, J.M. and Grossman, L., 1988, Enthalpies of formation of CaAl_4O_7 and $\text{CaAl}_{12}\text{O}_{19}$ (hibonite) by high-temperature solution calorimetry (abs.). 2nd International Symposium on Experimental Mineralogy, Petrology and Geochemistry, Bochum, FRG.
- 12) Winkler, B., Geiger, C.A. and Langer, K., 1988, Compositional determination of ternary $(\text{Ca,Mg,Fe})_3\text{Al}_2\text{Si}_3\text{O}_{12}$ garnets by infrared spectroscopy (abs.) *Ibid.*
- 13) Geiger, C.A., Langer, K. and Winkler, B., 1988, OH^- in synthetic pyrope (abs.). *Ibid.*
- 14) Peterson, J.W. and Geiger, C. A., 1988, Two generations of garnet growth in the Harwood Gneiss, Dickinson County, Michigan (abs.). Institute of Lake Superior Geology, 34th Annual Meeting, Marquette, Michigan.
- 15) Grossman, L., Geiger, C.A., Kleppa, O.J., Mysen, B.O. and Lattimer, J.M., 1988, Stability of Hibonite and CaAl_4O_7 in the solar nebula (abs.). XVIIth Meeting of the Lunar and Planetary Science. The Lunar and Planetary Institute, Houston, Texas.
- 16) Geiger, C.A., Winkler, B. and Langer, K., 1988, IR spectra almandine-grossular and almandine-pyrope garnets: Evidence for equivalent site behaviour (abs.). V.M. Goldschmidt Centennial Conference. Geochemical Society, Hunt Valley, Maryland.
- 17) Geiger, C.A., Langer, K., Winkler, B., Ross II, C.R., Bell, D.R. and Rossman, G.R., 1988, The OH component in synthetic garnet (abs.). Geological Society of America, 100th Annual Meeting, Denver, Colorado.
- 18) Geiger, C.A. and Hu, X., 1988, The NIR spectra of natural almandine-pyrope and almandine-spessartine garnets and their relation to thermodynamic mixing properties (abs.). European Meeting on Absorption Spectroscopy in Mineralogy, University of Rome, Rome, Italy.

- 19) Peters, M.T., Peterson, J.W. and Geiger, C.A., 1988, High P-T granulite in the Upper Peninsula of Michigan Lake Superior Region (abs.). Geological Society of America, 100th Annual Meeting, Denver, Colorado.
- 20) O'Neill, B., Bass, J.D., Rossman, G.R., Langer, K. and Geiger, C.A., 1988, Elastic properties of hydrous garnets (abs.). EOS, Annual AGU Fall Meeting, San Francisco, California.
- 21) Geiger, C. A., 1989, Macroscopic thermodynamic and microscopic properties of aluminosilicate garnets in the system $(\text{Fe}^{2+}, \text{Mn}^{2+}, \text{Ca}, \text{Mg})_3\text{Al}_2\text{Si}_3\text{O}_{12}$ (abs.). 28th International Geological Congress, Washington, D.C., U.S.A.
- 22) Geiger, C.A., Langer, K., Bell, D.R. and Rossman, G.R., 1989, Realbau of pyrope single crystals grown hydrothermally (abs.). International Conference on Crystal Structure, Microstructure and Properties of Minerals and Ceramic Materials, Ruhr-Universität, Bochum, FRG.
- 23) Amthauer, G., Geiger, C.A. and Lottermoser, W., 1989, A Mössbauer study of synthetic almandine-grossular garnets (abs.). European Union of Geosciences, Vth Annual Meeting, Strasbourg, France.
- 24) Geiger, C.A., Krause, C., Ross II, C.R., Amthauer, G. and Langer, K., 1989, Characterization of almandine, pyrope and almandine and pyrope-grossular solid solutions (abs.). European Union of Geosciences, Vth Biannual Meeting, Strasbourg, France.
- 25) Geiger, C.A., 1989, FTIR Spectroscopic studies of garnet-powders and single crystals (abs.). Joint Soviet-German Spectroscopic Conference, Moscow, USSR.
- 26) Geiger, C.A., Lager, G.A., Amthauer, G., Richardson, J. F. and Armbruster, T., 1989, Almandine Garnet: synthesis, structure, and Mössbauer and NIR spectroscopy (abs.). 12th European Crystallographic Meeting, Moscow, USSR.
- 27) Geiger, C.A., 1989, Spectroscopic and thermodynamic studies of aluminosilicate garnets (abs.). 67th Annual Meeting of Deutsche Mineralogische Gesellschaft, Berlin, FRG.
- 28) Olijnyk, H., Paris, E., Geiger, C.A., Webb, S.L., Lager, G.A., 1990, Compressional Study of Hydrogrossular and Grossular (abs.). 3rd International Symposium on Experimental Mineralogy, Petrology and Geochemistry, Edinburgh, UK
- 29) Geiger, C.A., Merwin, L. and Sebal, A., 1990, Ordering studies in grossular and pyrope garnets using ^{29}Si NMR and ^{57}Fe Mössbauer spectroscopy (abs.). *Ibid.*
- 30) Geiger, C.A., Lottermoser, W. and Amthauer, G., 1990, A temperature dependent ^{57}Fe Mössbauer study of almandine-grossular and almandine-pyrope garnet: A comparison (abs.). *Ibid.*
- 31) Lager, G.A., Olijnyk, H. and Geiger, C.A., 1990, Geometric-modeling of the compressibility of grossular-hydrogrossular garnets. (abs.). Geological Society of America Meeting Dallas, Texas, October.
- 32) Schneider, H., Geiger, C.A., Olijnyk, H., Wokaun, A. and Häfner, W., 1990, High pressure Raman spectroscopic study of synthetic almandine-pyrope garnets. (abs.). American Geophysical Union Fall Meeting, San Francisco, December.
- 33) Geiger, C.A., Merwin, L. and Sebal, A., 1990, Pyrope-grossular garnets: Synthesis and ^{29}Si MAS NMR spectroscopy. (abs.). *Ibid.*
- 34) Geiger, C.A., Rubie, D.C., Ross, C.R. and Seifert, F., 1991, Synthesis and ^{57}Fe Mössbauer study of $(\text{Mg}, \text{Fe})\text{SiO}_3$ garnet. (abs.). EUG VI, Strasbourg, France.
- 35) Olijnyk, H., Geiger, C.A., Schneider, H., Wokaun, A. and Häfner, W., 1991, Effect of composition and pressure on the Raman spectra of almandine-pyrope garnets. (abs.). *Ibid.*
- 36) Lager, K., Robarick, E., Koch-Müller, M., Geiger, C.A. and Rüscher, C., 1991, High pressure crystal growth and H-bearing defects in pyrope. (abs.). *Ibid.*
- 37) Fiquet, G., Gillet, P., Malezieux, J. M. and Geiger, C.A., 1991, High-temperature and high-pressure Raman spectroscopy of end-member Garnets. (abs.). *Ibid.*
- 38) Libourel, G., Geiger, C.A., Merwin, L. and Sebal, A., 1991, High-resolution solid-state ^{29}Si and ^{27}Al MAS NMR spectroscopy of glasses in the system $\text{CaSiO}_3\text{-MgSiO}_3\text{-Al}_2\text{O}_3$. (abs.). IVth Silicate Melt Workshop, Hohwald-Elsaß, France, March 19-23.
- 39) Geiger, C.A., Rubie, D.C., Ross, C.R. and Seifert, F., 1991, Cation partitioning in $(\text{Mg}, \text{Fe})\text{SiO}_3$ garnet. (abs.). International Union of Geodesy and Geophysics, Vienna, Austria.

- 40) Armbruster, Th., Geiger, C.A., Amthauer, G., Lottermoser, W. and Lager, G.A., 1991, A single crystal X-ray and ^{57}Fe Mössbauer spectroscopic study of synthetic almandine-pyrope garnets at 293 and 100 K. (abs.). American Geophysical Union Fall Meeting, San Francisco, December.
- 41) Artioli, G. and Geiger, C.A., 1991, Fe in pumpellyite-group minerals: A combined diffraction and spectroscopy study. (abs.). Italian Society of Mineralogy and Petrology, Ferrara, Italy, October.
- 42) Lager, G.A., Geiger, C.A. and Olijnyk, H., 1991, Effect of H on the compressibility of garnet. (abs.). American Geophysical Union, Spring Meeting, Baltimore, USA, 143.
- 43) Geiger, C.A., Rubie, D.C., Ross, C.R. II and Seifert, F., 1991, A cation partitioning study of $(\text{Mg,Fe})\text{SiO}_3$ garnet using ^{57}Fe Mössbauer Spectroscopy. (abs.). American Geophysical Union Fall Meeting, San Francisco, CA, USA, December.
- 44) Geiger, C.A. and Rossman, G.R., 1992, The crystal field stabilization energies of Fe^{2+} in almandine-pyrope and almandine-spessartine garnets. (abs.). Fourth International Symposium of Experimental Mineralogy, Petrology and Geochemistry, Clermont-Ferrand, April 15-17, France.
- 45) Geiger, C.A. and Armbruster, Th., 1992, Cation disorder in silicate garnets. (abs.). 70th Annual Meeting der Deutsche Mineralogische Gesellschaft, Tübingen, September 12-20th, FRG.
- 46) Geiger, C.A. and Rossman, G.R., 1992, CFSE of Fe^{2+} in almandine-pyrope and almandine-spessartine solid solutions. (abs.). AGU Fall Meeting, San Francisco, CA, USA.
- 47) Geiger, C.A., 1993, Hydrothermal synthesis of large garnet single crystals. (abs.). EUG VII, Strasbourg, France.
- 48) Geiger, C.A. and Feenstra, A., 1993, ^{57}Fe Mössbauer spectroscopy and molar volumes of mixing of synthetic almandine-spessartine garnets. (abs.). *Ibid.*
- 49) Geiger, C.A., 1993, Bonding and bulk modulus characteristics of the garnet family. (abs.). XVIII European Geophysical Society, Wiesbaden, Germany.
- 50) Geiger, C.A., Czank, M. and Rubie, D.C., 1993, TEM Investigation of high-pressure garnet of orthopyroxene stoichiometry. (abs.). Deutsche Mineralogische Gesellschaft, Munich, FRG.
- 51) Bosenick, A., Geiger, C.A. and Sebald, A., 1993, ^{29}Si -NMR Spektroskopie an Pyrop-Grossular Mischkristallen. (abs.). *Ibid.*
- 52) Geiger, C.A., von Gliszynski, U. and Rossman, G.R., 1993, OH in synthetic pyropes containing Ti, Na, Ca and B. (abs.). *Ibid.*
- 53) Geiger, C.A., 1993, ^{57}Fe -Mössbauer Spectroscopy of almandine-spessartine garnets. (abs.) AGU Fall Meeting, San Francisco, Ca, USA.
- 54) Czank, M. and Geiger, C.A., 1993, TEM investigation of a garnet of orthopyroxene stoichiometry. (abs.). *Ibid.*
- 55) Geiger, C.A., Feenstra, A., and von Saldern, Ch., 1994, Binary volumes of mixing in the garnet ternary almandine-spessartine-pyrope. (abs.). 5th International Conference on Experimental Mineralogy, Petrology and Geochemistry, London, UK.
- 56) Geiger, C.A., von Saldern, Ch., and Feenstra, A., 1994, Binary molar volumes of mixing of garnets in the system $\text{Fe}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ - $\text{Mn}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ - $\text{Mg}_3\text{Al}_2\text{Si}_3\text{O}_{12}$. (abs.). International Mineralogical Association meeting, Pisa, Italy.
- 57) Armbruster, Th. and Geiger, C.A., 1994, Crystal chemistry and dynamics of the silicate garnets. (abs.). *Ibid.*
- 58) Geiger, C.A., 1994, Near infrared and ^{57}Fe Mössbauer spectroscopic investigations on almandine garnet solid solutions. (abs.). *Ibid.*
- 59) Bosenick, A. and Geiger, C.A., 1994, Thermophysikalische Eigenschaften von Pyrop-Grossular-Mischkristallen. (abs.) Deutsche Mineralogische Gesellschaft, Freiberg, FRG.
- 60) Geiger C.A. and Armbruster, Th., 1995, Spessartine garnet: A heat capacity and temperature dependent single crystal X-ray study. (abs.) Deutsche Mineralogische Gesellschaft, Strasbourg, France.
- 61) Bosenick, A., Geiger, C.A., Cemic, L., 1995, Heat capacity measurements between 350 and 1000 K along the join pyrope-grossular. (abs.) Deutsche Mineralogische Gesellschaft, Strasbourg, France.
- 62) Geiger, C.A., 1995, A Moessbauer spectroscopic investigation of natural cordierites. (abs.) Geological Society of America, New Orleans, USA.

- 63) Geiger, C.A., Bosenick, A. and Armbruster, Th., 1996, Heat capacity measurements and temperature dependent single crystal X-ray structural refinements of aluminosilicate garnets. (abs.). VIth International Symposium of Experimental Mineralogy, Petrology and Geochemistry, Bayreuth, Germany.
- 64) Khomenko, V.M., Langer, K. and Geiger, C.A., 1996, UV/VIS/NIR single crystal polarized absorption spectra of natural cordierites. (abs.). VIth International Symposium of Experimental Mineralogy, Petrology and Geochemistry, Bayreuth, Germany.
- 65) Geiger, C.A., 1996, A ^{57}Fe Mössbauer spectroscopic investigation of natural cordierites. (abs.). VIth International Symposium of Experimental Mineralogy, Petrology and Geochemistry, Bayreuth, Germany.
- 66) Bosenick, A., Geiger, C.A., and Cemic, L., 1996, A thermal expansion and heat capacity investigation of pyrope-grossular garnet solid solutions. (abs.). VIth International Symposium of Experimental Mineralogy, Petrology and Geochemistry, Bayreuth, Germany.
- 67) Kolesov, B.A. and Geiger, C.A., 1996, Single crystal Raman spectra of end-member $\text{X}_3\text{Y}_2\text{Si}_3\text{O}_{12}$ silicate garnets. (abs.). Georaman-96 Conference. Nantes, France.
- 68) Kolesov, B.A. and Geiger, C.A., 1996, Resonance Raman scattering and the electronic states of Fe^{3+} in $\text{Ca}_3\text{Fe}_2\text{Si}_3\text{O}_{12}$ andradite garnet. (abs.). Georaman-96 Conference. Nantes, France.
- 69) Kolesov, B.A. and Geiger, C.A., 1996, Mode behavior in the Raman spectra of silicate garnet solid solutions: The pyrope-grossular solid solution binary. (abs.). Georaman-96 Conference. Nantes, France.
- 70) Geiger, C.A. and Kolesov, B.A., 1996, The Raman Spectrum of $\text{Mg}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ -Pyrope Garnet and Mode Assignments Based on Isotopic Substitution with ^{26}Mg . (abs.). Georaman-96 Conference. Nantes, France.
- 71) Bosenick, A., Geiger, C.A., and Cemic, L., 1996, Beziehung zwischen thermischer Ausdehnung und Molwärme von Pyrop-Grossular Mischkristallen. (abs.). Deutsche Mineralogische Gesellschaft, Kiel, Germany.
- 72) Geiger, C.A., 1996, IR phonon spectra of binary garnet solid solutions in the system almandine-pyrope-spessartine-grossular. (abs.). Deutsche Mineralogische Gesellschaft, Kiel, Germany.
- 73) Rodehorst, U., Armbruster, T., Geiger, C.A., 1997, Structural study of grossular and spessartine between 100 and 650 K. (abs.). DGK, Hamburg, Germany.
- 74) Bosenick, A., Phillips, B. and Geiger, C.A., 1997, An investigation of temperature dependent Ca-Mg short-range order in synthetic pyrope-grossular garnets. (abs.). EUG 9, Strasbourg, France.
- 75) Geiger, C.A., 1997, IR spectroscopic measurements of binary garnet solid solutions in the system almandine-pyrope-spessartine-grossular and implications for the heat capacities of mixing. (abs.). EUG 9, Strasbourg, France.
- 76) Quartieri, S., Antonioli, G., Geiger, C.A., and Artioli, G., 1997, EXAFS determination of the structural site of Yb in synthetic pyrope and grossular garnets. (abs.). EUG 9, Strasbourg, France.
- 77) Bosenick, A., Cemic, L., Geiger, C.A., Rodehorst, U., and Peun, T., 1997, In-situ X-ray diffraction measurements of synthetic aluminosilicate garnets and katoite at high pressures and temperatures. HASY Lab Report.
- 78) Geiger, C.A., 1997, Thermodynamic and crystal chemical properties of garnets in the system $\text{Fe}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ - $\text{Mg}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ - $\text{Mn}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ - $\text{Ca}_3\text{Al}_2\text{Si}_3\text{O}_{12}$. (invited abs.). Deutsche Mineralogische Gesellschaft, Köln, Germany.**
- 79) Geiger, C.A., 1997, Thermodynamic properties of garnets in the system $\text{Fe}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ - $\text{Mg}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ - $\text{Mn}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ - $\text{Ca}_3\text{Al}_2\text{Si}_3\text{O}_{12}$. (abs.). Mineral Equilibria and Databases, IMA Working Group, Helsinki, Finland.
- 80) Bosenick, A., Dove, M.T. and Geiger, C.A., 1997, A novice doing lattice energy calculations: Some experiences and results from modeling garnets. (abs.). Deutsche Mineralogische Gesellschaft, Köln, Germany.
- 81) Geiger, C.A., 1998, Could the effect of order-disorder in garnet be important for upper mantle petrology? (abs.). 7th International Kimberlite Conference. Cape Town, South Africa.

- 82) Stahl, A., Geiger, C.A., and Rossman, G.R., 1998, UV/VIS- und IR Spektroskopische Untersuchungen an Synthetischen Pyrop-Einkristallen. (abs.). Deutsche Mineralogische Gesellschaft, Berlin, Germany.
- 83) Geiger, C.A. and Amthauer, G., 1998, A ^{57}Fe Mössbauer spectroscopic Investigation of $\text{Fe}_3\text{Al}_2\text{Si}_3\text{O}_{12}/\text{Mg}_3\text{Al}_2\text{Si}_3\text{O}_{12}/\text{Mn}_3\text{Al}_2\text{Si}_3\text{O}_{12}/\text{Ca}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ Garnet Solid Solutions. (abs.). Deutsche Mineralogische Gesellschaft, Berlin, Germany.
- 84) Geiger, C.A. and Stahl, A., 1998, Synthesis and characterization of pyropic garnets. International Mineralogical Association, 17th General Meeting. (invited abs.). Toronto, Canada.**
- 85) Geiger, C.A., 1998, Volumes and volumes of mixing in the garnet system $(\text{Ca},\text{Mg},\text{Fe}^{2+},\text{Mn}^{2+})\text{Al}_2\text{Si}_3\text{O}_{12}$. (invited abs.). International Mineralogical Association, 17th General Meeting. Toronto, Canada.
- 86) Boffa Ballaran, T., Carpenter, M., and Geiger, C.A., 1998, Hard mode IR spectroscopy of garnet solid solutions. (abs.). International Mineralogical Association, 17th General Meeting. Toronto, Canada.
- 87) Voigtländer, H. and Geiger, C.A. 1998, Wärmekapazitäts-Messungen an Mg- und Fe-Cordierit. (abs.). Deutsche Mineralogische Gesellschaft, Berlin, Germany.
- 88) Geiger, C.A., 1998, Silicate garnets: Relationships between microscopic structural and macroscopic thermodynamic properties. (Invited Plenary Lecture - abs.). Society of Italian Mineralogy and Petrology, Monopoli, Italy.**
- 89) Bosenick, A., Dove, M.T., and Geiger, C.A., 1998, An investigation of ordering in pyrope-grossular garnet solid solutions. (abs.). 2nd Kiel Workshop on Computational Mineralogy - Quantum Mechanics. Kiel, FGR.
- 90) Geiger, C.A., 1998, Bonding in garnet as revealed by ^{57}Fe Mössbauer measurements. (abs.) AGU Fall Meeting, San Francisco, CA, USA.
- 91) Voigtländer, H. and Geiger, C.A., 1998, Heat capacity measurements on synthetic Mg- and Fe-cordierite between 100 and 900 K. (abs.). AGU Fall Meeting, San Francisco, CA, USA.
- 92) Bosenick, A., Dove, M.T., Geiger, C.A., 1999, Simulation studies of silicate solid solutions. (abs.). EUG 10, Strasbourg, France.
- 93) Voigtländer, H. and Geiger, C.A., 1999, Heat capacity measurements of synthetic Mg- and Fe-cordierite. (abs.). EUG 10, Strasbourg, France.
- 94) Stahl, A., Geiger, C.A., and Rossman, G.R., 1999, Spectroscopic measurements on transition metal bearing pyropes: The incorporation of "water". (abs.). EUG 10, Strasbourg, France.
- 95) Grams, M. and Geiger, C.A., 1999, Hard mode IR spectroscopy of natural Mg-Fe cordierite solid solutions. (abs.). EUG 10, Strasbourg, France.
- 96) Geiger, C.A., Armbruster, T., Khomenko, V., and Quartieri, S., 1999, Cordierite I: The role of Fe^{2+} . (abs.). Deutsche Mineralogische Gesellschaft, Vienna, Austria.
- 97) Kolesov, B.A. and Geiger C.A., 1999, Cordierite II: The role of CO_2 and H_2O . (abs.). Deutsche Mineralogische Gesellschaft, Vienna, Austria.
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- 99) Kolesov, B.A. and Geiger, C.A., 1999, A single-crystal Raman study of the orientation and vibrational states of molecular water in synthetic beryl. (abs.). Georaman 1999, Valladolid, Spain.
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- 101) Kolesov, B.A. and Geiger, C.A., 1999, Cordierite - The role of CO_2 and H_2O . (abs.). AGU Fall Meeting, San Francisco, CA, USA.
- 102) Geiger, C.A., Armbruster, T., Khomenko, V., and Quartieri, S., 2000, Cordierite I: The coordination of Fe^{2+} . (abs.). VIIIth International Symposium of Experimental Mineralogy, Petrology and Geochemistry, Bergamo, Italy.
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- 108) Geiger, C.A., Hallmann, L., and Weber, S.-U., 2001, A ⁵⁷Fe Moessbauer and powder IR spectroscopic study of natural sapphirine. (abs.). EUG 11, Strasbourg, France.
- 109) Geiger, C.A., Stahl, A., and Rossman, G.R., 2001, Single-crystal IR spectroscopic measurements on transition metal bearing pyrope: The incorporation of hydroxide in upper mantle garnets. (abs.). EUG 11, Strasbourg, France.
- 110) Rodehorst, U., Carpenter, M.A., and Geiger, C.A., 2001, Local structural heterogeneity in spessartine-grossular solid solutions and their saturation behaviour. (abs.). EUG 11, Strassbourg, France.
- 111) Taran, M., Langer, K., and Geiger, C.A., 2001, Single-crystal electronic spectra of synthetic pyrope. (abs.) 4th European Spectroscopic Meeting. Paris, France.
- 112) Weber, S-U., Geiger, C.A., and Turkin, A., 2001, Local structural heterogeneities in pyrope-spessartine and Fe-Mg knorringite solid solutions. (abs.). Deutsche Mineralogische Gesellschaft, Potsdam, Germany.
- 113) Geiger, C.A., Rahmoun, N.-S. and Heide, K., 2001, Volatiles in cordierite. (abs.). Deutsche Mineralogische Gesellschaft, Potsdam, Germany.
- 114) Kolesov, B.A. and Geiger, C.A., 2002, Molecular H₂O-silicate interactions. (abs.). International Mineralogical Association, 18th General Meeting. Edinburgh, U.K.
- 115) Geiger, C.A., 2002, Garnet solid solution properties: Microscopic strain and thermodynamic mixing. (abs.). International Mineralogical Association, 18th General Meeting. (abs.). Edinburgh, U.K.
- 116) Weiszburg, T.G., Benea, M., Buda, Gy., Christofides, G., Compagnoni, R., Effenberger, H.S., Geiger, Ch.A., Ferraris, G., Koroneos, A., Lovas, Gy.A., Merlino, S., Müller, W.F., Pasero, M., Pop, D., Pósfai, M., Tillmanns, E., Vaughan, D.J., 2002, Co-ordinated core curriculum in mineral sciences: A European approach. (abs.). International Mineralogical Association, 18th General Meeting. (invited abs.). Edinburgh, U.K.
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- 201) Scandolo L., Milani S., Mazzucchelli M.L., Alvaro M., Di Prima M., Domeneghetti M.C., Nestola F., Geiger C.A., and Stagno V., 2016, Thermoelastic properties of silicate garnets and their use in the study of diamond formation. Second European Mineralogical Conference, Rimini, Italy.
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- 203) Geiger, C.A. and Dachs, E., 2017, Recent developments in low-temperature calorimetry and C_p and S° behavior of minerals. Goldschmidt Conference, Paris, France.
- 204) Xue, X., Kanzaki, M., and Geiger, C.A., 2017, Hydrogen incorporation mechanism in synthetic katoite-grossular and natural grossular: ^1H static and MAS NMR and first-principles calculation. Goldschmidt Conference, Paris, France.
- 205) Geiger, C.A. and Dachs, E., 2018, Recent developments and the future of low-temperature calorimetric Investigations: Consequences for thermodynamic calculations and thermodynamic data bases. Joint 5th Central-European Mineralogical Conference and 7th Mineral Sciences in the Carpathians Conference. Banská Štiavnica, Slovakia.
- 206) Geiger, C.A., Grodzicki, M. and Dachs, E., 2018, Advances in calorimetric techniques and the magnetic behavior of garnets, AGU Fall Meeting, Washington DC, USA.

Invited Full Lectures at International Workshops and Short Courses

- 1) Geiger, C.A., 1995, **Vibrational Spectroscopy in the Earth Sciences. In: Scientific proposals for neutron scattering with present and future sources, European Science Foundation and European Neutron Scattering Association, Grenoble, France.**
- 2) Geiger, C.A., 1997, **Thermodynamics in Mineralogy: A Macroscopic Approach. In 1st Kiel Workshop on Computational Mineralogy, Universität Kiel, B. Winkler, Ed., 27-34.**
- 3) Geiger, C.A., 1997, **The P-T stability and thermodynamic properties of minerals. In Proceedings for CCAM Workshop "How can ab initio calculations be an effective tool for the study of mineral properties?" Lyon, France.**
- 4) Geiger, C.A., 2001, **Thermodynamic mixing properties of binary oxide and silicate solid solutions determined by direct measurements: The role of strain. European Mineralogical Union, Lübeck, Germany.**
- 5) Geiger, C.A., 2001, **Solid solutions: Background, history and scientific perspective. European Mineralogical Union, Lübeck, Germany.**
- 6) Geiger, C.A. and Kolesov, B.A., 2002, **Microscopic-macroscopic relationships in silicates: Examples from IR and Raman spectroscopy and heat capacity measurements. European Mineralogical Union, Budapest, Hungary.**
- 7) Geiger, C.A., 2004, **Spectroscopic investigations relating to the structural, crystal-chemical and lattice-dynamic properties of $(\text{Fe}^{2+}, \text{Mn}^{2+}, \text{Mg}, \text{Ca})_3\text{Al}_2\text{Si}_3\text{O}_{12}$ garnet: A review and analysis. European Mineralogical Union, Vienna, Austria.**
- 8) Geiger, C.A., 2004, **An introduction to spectroscopic methods in the mineral sciences and geochemistry. European Mineralogical Union, Vienna, Austria.**
- 9) Geiger, C.A., 2006, **IR Spectroscopy of Crystalline Systems, MSSC 2006 - Ab-Initio Modeling in Solid State Chemistry, Torino, Italy.**
- 10) Geiger, C.A., 2006, **Thermodynamics of Crystalline Systems, MSSC 2006 - Ab-Initio Modeling in Solid State Chemistry, Torino, Italy.**
- 11) Geiger, C.A., 2011, **Introduction to thermal analysis and calorimetry. Workshop - Calorimetry in the Geosciences - Theory, Experiment and Applications. Salzburg, Austria.**
- 12) Geiger, C.A., 2011, **Calorimetric study and thermodynamic properties of garnet. Workshop - Calorimetry in the Geosciences - Theory, Experiment and Applications Salzburg, Austria.**
- 13) Geiger, C.A., 2013, **Introduction to thermal analysis and calorimetry. Workshop - Calorimetry in the Geosciences - Theory, Experiment and Applications. Jena, Germany.**

14) Geiger, C.A., 2013, Calorimetry and thermodynamics of mineral solid solutions. Workshop - Calorimetry in the Geosciences - Theory, Experiment and Applications. Jena, Germany.