

Galen Dean Stucky

Professor of Chemistry and Materials

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Education

McPherson College

B.S. 1957 (Chemistry and Physics)

Iowa State University

Ph.D. 1962 (Physical Chemistry, with R. E. Rundle)

“Molecular configurations of some of the solvated compounds of the Grignard system”

Professional Experience

1962-63 Postdoctoral Fellow, Massachusetts Institute of Technology, Physics (C. G. Shull)

1963 NSF Postdoctoral Fellow, Quantum Chemistry Institute, Physical Chemistry

1964-68 Assistant Professor, University of Illinois, Chemistry

1968-72 Associate Professor, University of Illinois, Chemistry

1972-81 Professor, University of Illinois, Chemistry

1979-80 Member of Technical Staff, Sandia National Laboratory

1980-81 Supervisor, Sandia National Laboratory, Solid State Materials

1981-85 Group and Research Leader, DuPont Central Research and Development

1985-- Professor, University of California, Santa Barbara

2006-2016 E. Khashoggi Industries, LLC Professor in Letters and Science, University of California, Santa Barbara

2016-- Khashoggi Chair in Materials Chemistry, University of California, Santa Barbara

Selected Honors

Fellow, American Association for the Advancement of Science (1994); Alexander von Humboldt Senior US Scientist award (2000); American Chemical Society Award in the Chemistry of Materials (2002); International Mesosstructured Materials Association Award (2004); Fellow, American Academy of Arts and Sciences (2005); Advanced Technology Applications for Combat Casualty Care (ATACCC) Award (2008); Nano Today Award (2011); Fellow, American Chemical Society (2013); election to National Academy of Sciences (2013); Prince of Asturias Award, with A. Corma and M. E. Davis (2014); Fellow, National Academy of Inventors (2015)

Lectureships. First Annual Margaret Etter Memorial Lecturer, University of Minnesota (1993);

Distinguished Lecturer, York University (1994); Watt Centennial Lecturer, University of Texas at Austin (1999); one of three lecturers at the Symposium in Honor of the 100th Anniversary of the Foundation of the Chemical Institutes at “Hessische Strasse” (2000); Herbert H. Johnson Memorial Lecturer, Cornell University (2000); Raymond Siedle Lecturer, Indiana University (2001); Coover Lecturer, Iowa State University (2002); Gomberg Lecturer, University of Michigan (2003); Distinguished Lecturer in Inorganic Chemistry, Northwestern University (2003); Dow/Karabatsos Lecturer, Michigan State University (2004); Nanqiang Lecturer, Xiamen University (2008); Barrer Lecturer, The Pennsylvania State University (2011); Edith Flanigen Lecturer, UOP (2015)

Special Appointments. Visiting Professor Fellow, University of Uppsala, Uppsala, Sweden (1970);

United Nations Industrial Development Organization Fellow to National Chemical Laboratory, Pune, India (1990); Exchange Professor with Academy of Science, Moscow, and University of Leningrad (1990); Visiting Professor Fellow, University of Konstanz (1992,1993); Honorary Professor, Fudan University, Shanghai, China (2000--); Inorganic Foundation Visiting Professor, University of Sydney (2001); Guest Professor, Peking University (2006-2008)

Scientific Advisory Boards. Biosym, Inc. (1991-97), High Throughput Experimentation GmbH (1998-), SBA Materials, Inc. (2001-2004), GRT Inc. (2002-2012), Institute of Bioengineering and Nanotechnology, Singapore (2004-2017), SiGNa Chemistry (2008--), State Key Laboratory of Physical Chemistry of Solid Surfaces, Xiamen (2009-2019), International Center for Materials Nanoarchitectronics, Japan (2009-2012), The Molecular Foundry at Lawrence Berkeley National Laboratory (2006-2013), Joint Center for Artificial Photosynthesis (2012-2020), Materials Synthesis and Simulation across Scales Initiative, Pacific Northwest National Laboratories (2013-2019), Cayuga Biotech (2015--), MILO-ML (2020--)

Group members. Since 1968, over 100 students have been awarded masters or doctoral degrees under Galen Stucky's supervision or co-supervision; they subsequently chose a variety of career paths: over 35 in academic teaching/research/administration, with others initiating startup companies, holding research positions in national laboratories and in industry, or practicing law. Of his postdoctoral associates, over three dozen were or are on the faculties of universities in the U.S., China, Taiwan, Korea, and elsewhere. In recent years, numerous UCSB undergraduate students and visiting undergraduates have participated in the group's research activities. A partial list of former group members is maintained at labs.chem.ucsb.edu/stucky/galen/stuckygroup/Past.html.

United States Patents (list updated at labs.chem.ucsb.edu/stucky/galen/stuckygroup/patents.html)

- “Engineered cementitious hazardous contaminant barriers and their method of manufacture”; G. Stucky, H. M. Jennings, S. K. Hodson; No. 5,169,566 (December 8, 1992)
- “M41S materials having nonlinear optical properties”; J. S. Beck, G. H. Köhl, D. H. Olson, J. L. Schlenker, G. D. Stucky, J. C. Vartuli; No. 5,348,687 (September 20, 1994)
- “Sensor device containing mesoporous crystalline material”; D. H. Olson, G. D. Stucky, J. C. Vartuli; U. S. Patent No. 5,364,797 (November 15, 1994)
- “Method of and apparatus for manufacturing methanol”; J. H. Sherman, P. C. Ford, G. D. Stucky, P. Grosso; No. 6,214,176 (April 10, 2001)
- “Modular, energy-dissipating material and method for using it”; P. K. Hansma, J. Kindt, T. J. Deming, D. E. Morse, G. D. Stucky; No. 6,376,636 (April 23, 2002)
- “Process for synthesizing olefin oxides”; X. P. Zhou, G. D. Stucky, J. H. Sherman; No. 6,403,840 (June 11, 2002)
- “Integrated process for synthesizing alcohols and ethers from alkanes”; X. P. Zhou, I. M. Lorkovic, G. D. Stucky, P. C. Ford, J. H. Sherman, P. Grosso; No. 6,462,243 (October 8, 2002) and No. 6,472,572 (October 29, 2002)
- “Integrated process for synthesizing alcohols and ethers from alkanes”; X. P. Zhou, G. D. Stucky, J. H. Sherman; No. 6,465,696 (October 15, 2002)
- “Hierarchically ordered porous oxides”; P. Yang, T. Deng, G. M. Whitesides, G. D. Stucky, D. Zhao, B. F. Chmelka, D. Pine, P. Feng; No. 6,541,539 (April 1, 2003)
- “Block copolymer processing for mesostructured inorganic oxide materials”; G. D. Stucky, B. F. Chmelka, D. Zhao, N. Melosh, Q. Huo, J. Feng, P. Yang, D. J. Pine, D. I. Margolese, W. W. Lukens, Jr., G. H. Fredrickson, P. Schmidt-Winkel; No. 6,592,764 (July 15, 2003), No. 7,176,245 (February 13, 2007), and No. 7,763,665 (July 27, 2010)
- “Methods, compositions, and biomimetic catalysts for in vitro synthesis of silica, polysilsequioxane, polysiloxane, and polymetallo-oxanes”; D. E. Morse, G. D. Stucky, T. J. Deming, J. Cha, K. Shimizu, Y. Zhou; No. 6,670,438 (December 30, 2003)
- “Integrated process for synthesizing alcohols, ethers, aldehydes, and olefins from alkanes”; A. Yilmaz, G. A. Yilmaz, I. M. Lorkovic, G. D. Stucky, P. C. Ford, E. W. McFarland, J. H. Sherman; No. 6,713,655 (March 30, 2004)

- “Method for forming hierarchically ordered porous oxides”; P. Yang, T. Deng, G. M. Whitesides, G. D. Stucky, D. Zhao, B. F. Chmelka, D. Pine, P. Feng; No. 6,716,378 (April 6, 2004)
- “Self-healing organosiloxane materials containing reversible and energy-dispersive crosslinking domains”; J. H. Harreld, M. S. Wong, P. K. Hansma, D. E. Morse, G. D. Stucky; No. 6,783,709 (August 31, 2004)
- “Inorganic/block copolymer-dye composites and dye doped mesoporous materials for optical and sensing applications”; G. Wirnsberger, B. J. Scott, H. C. Huang, N. A. Melosh, P. Yang, B. F. Chmelka, G. D. Stucky; No. 6,952,436 (October 4, 2005)
- “Method of forming mesoscopically structured material”; P. Yang, T. Deng, G. M. Whitesides, G. D. Stucky, D. Zhao, B. F. Chmelka, D. J. Pine, P. Feng; No. 7,014,799 (March 21, 2006)
- “Hydrophilic polymer-oxide-phosphoric acid compositions for proton conducting membranes”; W. Hong, G. D. Stucky, K. Tasaki; No. 7,118,821 (October 10, 2006)
- “Method and apparatus for synthesizing olefins, alcohols, ethers, and aldehydes”; J. H. Sherman, E. W. McFarland, M. J. Weiss, I. Lorkovic, L. Laverman, S. Sun, D. J. Schaefer, G. D. Stucky, P. C. Ford; No. 7,161,050 (January 9, 2007)
- “Nanoparticle assembled hollow spheres”; J. Cha, T. J. Deming, G. D. Stucky, M. S. Wong, H. Birkedal, M. H. Bartl, J. L. Summerel; No. 7,563,457 (July 21, 2009)
- “Hydrogen cyano fullerene containing proton conducting membranes”; F. Wudl, G. D. Stucky, H. Wang, B. Jusselme, K. Tasaki, A. Venkatesan; No. 7,588,824 (September 15, 2009)
- “Hydrocarbon conversion process improvements”; J. H. Sherman, E. W. McFarland, M. J. Weiss, I. M. Lorkovic, L. E. Laverman, S. Sun, D. J. Schaefer, G. D. Stucky, P. C. Ford, P. Grosso, A. W. Breed, M. F. Doherty; No. 7,838,708 (November 23, 2010) and No. 8,415,512 (April 9, 2013)
- “Hydrocarbon synthesis”; I. M. Lorkovic, M. Noy, J. H. Sherman, M. J. Weiss, G. D. Stucky; No. 7,847,139 (December 7, 2010)
- “Inorganic materials for hemostatic modulation and therapeutic wound healing”; G. D. Stucky, T. A. Ostomel, Q. Shi, P. K. Stoimenov, P. A. Holden; No. 7,858,123 (December 28, 2010)
- “Colloidal sphere templates and sphere-templated porous materials”; J. H. Harreld, G. D. Stucky, N. L. Mitchell, J. S. Sakamoto; No. 8,137,525 (March 20, 2012)
- “High performance, crosslinked polymeric material for holographic data storage”; C. J. Hawker, G. D. Stucky, A. Mikhailovsky, A. Khan; No. 8,187,770 (May 29, 2012)
- “Mesocellular oxide foams as hemostatic compositions and methods of use”; G. Stucky, S. Baker, A. Sawvel; No. 8,202,549 (June 19, 2012) and No. 8,603,543 (December 10, 2013)
- “Hemostatic compositions and methods of use”; S. Baker, A. Sawvel, G. D. Stucky; No. 8,703,634 (April 22, 2014) and No. 9,302,025 (April 5, 2016)
- “Polyphosphate-functionalized inorganic nanoparticles as hemostatic compositions and methods of use”; D. Kudela, G. D. Stucky, A. May Masnou, G. B. Braun, J. H. Morrissey, S. A. Smith; No. 9,186,417 (November 17, 2015)
- “High energy capacitors boosted by both catholyte and anolyte”; G. D. Stucky, X. Ji; No. 9,196,425 (November 24, 2015)
- “Oxides for wound healing and body repair”; G. D. Stucky, T. A. Ostomel, Q. Shi, A. Sawvel, S. Baker; No. 9,326,995 (May 3, 2016)
- “Energy storage device including a redox-enhanced electrolyte”; G. D. Stucky, B. Evanko, N. Parker, D. Vonlanthen, D. Auston, S. W. Boettcher, S-E. Chun, X. Ji, B. Wang, X. Wang, R. S. Chandrabose; No. 9,728,344 (August 8, 2017)
- “Polyphosphate-functionalized inorganic nanoparticles as hemostatic compositions and methods of use”; D. Kudela, G. D. Stucky, A. May Masnou, G. B. Braun, J. H. Morrissey, S. A. Smith; No. 10,293,077 (May 21, 2019)

- “Pnictide containing catalysts for electrochemical conversion reactions and methods of use”; Y-S. Jun, J. A. Gerbec, G. D. Stucky; No. 10,388,947 (August 20, 2019)
- “Stable bromine charge storage in porous carbon electrodes using tetraalkylammonium bromides for reversible solid complexation”; G. D. Stucky, B. Evanko, S. J. Yoo, J. Lipton, S. W. Boettcher, X. Ji, X. Wang; No. 10,770,699 (September 8, 2020)
- “Polyphosphate-functionalized inorganic nanoparticles as hemostatic compositions and methods of use”; D. Kudela, G. D. Stucky, A. May Masnou, G. B. Braun, J. H. Morrissey, S. A. Smith; No. 10,842,908 (November 24, 2020)
- “Polyphosphate-functionalized inorganic nanoparticles as hemostatic compositions and methods of use”; D. Kudela, G. D. Stucky, A. May-Masnou, G. B. Braun, J. H. Morrissey, S. A. Smith; No. 11,707,550 (July 25, 2023)

Publications (list with DOI links at labs.chem.ucsb.edu/stucky/galen/stuckygroup/publications.html)

1. The structure of phenylmagnesium bromide dietherate and the nature of Grignard reagents, G. D. Stucky and R. E. Rundle, *J. Am. Chem. Soc.* 85, 1002-1003 (1963)
2. The crystal and molecular structure of $Mg_4Br_6O \cdot 4C_4H_{10}O$, a Grignard reagent oxidation product, G. D. Stucky and R. E. Rundle, *J. Am. Chem. Soc.* 86, 4821-4825 (1964)
3. The constitution of the Grignard reagent, phenylmagnesium bromide dietherate, G. D. Stucky and R. E. Rundle, *J. Am. Chem. Soc.* 86, 4825-4830 (1964)
4. Structural properties of tetramethylammonium tribromonickelate(II), G. D. Stucky, S. D'Agostino and G. L. McPherson, *J. Am. Chem. Soc.* 88, 4828-4831 (1966)
5. The crystal and molecular structure of tetraethylammonium tetrachloronickelate(II), G. D. Stucky, J. B. Folkers, and T. J. Kistenmacher, *Acta Cryst.* 23, 1064-1070 (1967)
6. On the association of the Grignard reagent, J. Toney and G. D. Stucky, *Chem. Commun. (London)*, 1168-1169 (1967)
7. Dative metal-nitrogen π -bonding in bis(dimethylamino)beryllium, J. L. Atwood and G. D. Stucky, *Chem. Commun. (London)*, 1169-1170 (1967)
8. The crystal and molecular structure of $[Al(CH_3)_3]_2 \cdot C_4H_8O_2$, J. L. Atwood and G. D. Stucky, *J. Am. Chem. Soc.*, 89, 5362-5366 (1967)
9. The crystal structure of $(CH_3)_4NNiCl_3$, G. D. Stucky, *Acta Cryst. B* 24, 330-337 (1968)
10. $Mg[Al(OCH_3)_2(CH_3)_2]_2 \cdot C_4H_8O_2$. A novel coordination compound of a metal alkoxide and a donor molecule, J. L. Atwood and G. D. Stucky, *J. Organomet. Chem.* 13, 53-60 (1968)
11. The preparation and crystal structure of $(CH_3)_5Al_2N(C_6H_5)_2$, μ -diphenylamino- μ -methyl-tetramethyldialuminum, V. R. Magnuson, and G. D. Stucky, *J. Am. Chem. Soc.* 90, 3269-3271 (1968)
12. Structural and spectroscopic studies of tetrachlorophosphonium tetrachloroferrate(III), $[PCl_4][FeCl_4]$, T. J. Kistenmacher and G. D. Stucky, *Inorg. Chem.* 7, 2150-2155 (1968)
13. Sodium 6-niobo(ethylenediamine)cobaltate(III) and its chromate(III) analog, C. M. Flynn, Jr. and G. D. Stucky, *Inorg. Chem.* 8, 178-180 (1969)
14. Heteropolyniobate complexes of manganese(IV) and nickel(IV), C. M. Flynn, Jr. and G. D. Stucky, *Inorg. Chem.* 8, 332-334 (1969)
15. The crystal structure of sodium-12-niobomanganate(IV), $Na_{12}MnNb_{12}O_{38} \cdot 50H_2O$, C. M. Flynn, Jr. and G. D. Stucky, *Inorg. Chem.* 8, 335-344 (1969)

16. Stereochemistry of polynuclear compounds of the main group elements. VII. The structure of octamethyldialuminum-monomagnesium, J. L. Atwood and G. D. Stucky, *J. Am. Chem. Soc.* **91**, 2538-2543 (1969)
17. Stereochemistry of polynuclear compounds of the main group elements. VIII. The crystal structure of bis[2-dimethylaminoethyl(methyl)amino]di(methylmagnesium), V. R. Magnuson and G. D. Stucky, *Inorg. Chem.* **8**, 1427-1433 (1969)
18. Stereochemistry of polynuclear compounds of the main group elements. IX. Structure of bis(dimethylamino)beryllium and its reaction with trimethylaluminum, J. L. Atwood and G. D. Stucky, *J. Am. Chem. Soc.* **91**, 4426-4430 (1969). Correction vol. **92**, page 1107 (1970)
19. Stereochemistry of polynuclear compounds of the main group elements. X. μ -diphenyl-amino- μ -methyl-tetramethyldialuminum, V. R. Magnuson and G. D. Stucky, *J. Am. Chem. Soc.* **91**, 2544-2550 (1969)
20. Stereochemistry of polynuclear compounds of the main group elements. XI. Dimethyl-(methylthio)aluminum, $[(CH_3)_2AlSCH_3]_n$, a new type of stereochemistry for an organoaluminum compound, D. J. Brauer and G. D. Stucky, *J. Am. Chem. Soc.* **91**, 5462-5466 (1969)
21. The crystal and molecular structure of N-methyl-1,4-diazabicyclo[2.2.2]octonium trichloro-aqua-nickelate(II). A high-spin five-coordinate complex of nickel(II) with monodentate ligands, F. K. Ross and G. D. Stucky, *Inorg. Chem.* **8**, 2734-2740 (1969)
22. Stereochemistry of polynuclear compounds of the main group elements. XII. The preparation and structure of ethyleniminodimethylaluminum trimer, J. L. Atwood and G. D. Stucky, *J. Am. Chem. Soc.* **92**, 285-288 (1970)
23. π -complexation in ion pair bonding. The structure of benzyl lithium triethylenediamine, S. P. Patterman, I. L. Karle, and G. D. Stucky, *J. Am. Chem. Soc.* **92**, 1150-1157 (1970)
24. The structural properties of dimethylbis(quinuclidine)magnesium, J. Toney and G. D. Stucky, *J. Organomet. Chem.* **22**, 241-249 (1970)
25. π -complexation in ion pair bonding. Tetra(1,4-epoxybutane)disodium(I) tetramethylbis-1,4-dihydro-1,4-naphthylenedialuminate, $[Na(C_4H_8O)_2]_2[Al(CH_3)_2C_{10}H_8]_2$, a novel organoaluminate structure, D. J. Brauer and G. D. Stucky, *J. Am. Chem. Soc.* **92**, 3956-3963 (1970)
26. New evidence supporting the formation of diaziridinium cation in the hydrolytic fission of diaziridines, J. S. Swanson and G. D. Stucky, *J. Heterocyclic Chem.* **7**, 667-669 (1970)
27. Geometry and stabilization of the $Ni_2Cl_8^{4-}$ anion in $[HN(C_2H_4)_3NCH_3NiCl_4]_2$, F. K. Ross and G. D. Stucky, *J. Am. Chem. Soc.* **92**, 4538-4544 (1970)
28. Single crystal paramagnetic resonance studies of V(II), Mn(II), and Ni(II) in $CsMgCl_3$ and the crystal structure of $CsMgCl_3$, G. L. McPherson, T. J. Kistenmacher, and G. D. Stucky, *J. Chem. Phys.* **52**, 815-824 (1970). Correction vol. **54**, page 1432 (1971)
29. Linear antiferromagnetism in spin-1 systems; $CsNiCl_3$, J. Smith, B. C. Gerstein, S. H. Liu, and G. D. Stucky, *J. Chem. Phys.* **53**, 418-422 (1970)
30. The structure of N-methyl-5,5-dimethyl-oxazolidine-2,4-dione, T. J. Kistenmacher and G. D. Stucky, *Acta Cryst. B* **26**, 1445-1450 (1970)
31. A structural study of two products of the reaction of phosphorus pentachloride with titanium tetrachloride. The crystal and molecular structures of bis(tetrachlorophosphonium) di- μ -chlorooctachlorodititanate(IV), $[PCl_4]_2[Ti_2Cl_{10}]$, and tetrachlorophosphonium tri- μ -chlorohexachlorodititanate(IV), $[PCl_4][Ti_2Cl_9]$, T. J. Kistenmacher and G. D. Stucky, *Inorg. Chem.* **10**, 122-132 (1971)
32. The stereochemistry of polynuclear compounds of the main group elements.

- [C₂H₅Mg₂Cl₃(C₄H₈O)₃]₂, a tetrameric Grignard reagent, J. Toney and G. D. Stucky, *J. Organomet. Chem.* 28, 5-20 (1971)
33. The crystal and molecular structure of 4-methylpyridinium triphenylphosphine tribromozincate, R. E. DeSimone and G. D. Stucky, *Inorg. Chem.* 10, 1808-1812 (1971)
 34. The stereochemistry of polynuclear compounds of the main group elements. A four-center and linear three-center methyl-bridged electron-deficient boron compound, D. Groves, W. E. Rhine, and G. D. Stucky, *J. Am. Chem. Soc.* 93, 1553-1554 (1971)
 35. Bonding and valence electron distribution in molecules: An X-Ray and neutron diffraction study of the crystal and molecular structure of tetracyanoethylene oxide, D. A. Matthews, J. Swanson, M. H. Mueller, and G. D. Stucky, *J. Am. Chem. Soc.* 93, 5945-5953 (1971). Correction vol. 94, page 2557 (1972)
 36. Bonding and valence electron distribution in molecules. Experimental determination of aspherical electron charge density in tetracyanoethylene oxide, D. A. Matthews and G. D. Stucky, *J. Am. Chem. Soc.* 93, 5954-5959 (1971)
 37. π -groups in ion pair bonding. Triphenylmethyl lithium tetramethylethylenediamine, J. J. Brooks and G. D. Stucky, *J. Am. Chem. Soc.* 94, 7333-7338 (1972)
 38. π -groups in ion pair bonding. Fluorenyllithium bisquinuclidine, J. J. Brooks, W. E. Rhine, and G. D. Stucky, *J. Am. Chem. Soc.* 94, 7339-7346 (1972)
 39. π -groups in ion pair bonding. Stabilization of the dianion of naphthalene by lithium tetramethylethylenediamine, J. J. Brooks, W. E. Rhine, and G. D. Stucky, *J. Am. Chem. Soc.* 94, 7346-7351 (1972)
 40. The structure of bis(methylammonium) tetrabromoferrate(III) bromide, (H₃CNH₃)₂[FeBr₄]Br, G. D. Sproul and G. D. Stucky, *Inorg. Chem.* 11, 1647-1650 (1972)
 41. Effect of exchange coupling on the spectra of transition metal ions. The ligand field spectrum and crystal structure of CsCrCl₃, G. L. McPherson, T. J. Kistenmacher, J. B. Folkers, and G. D. Stucky, *J. Chem. Phys.* 57, 3771-3780 (1972)
 42. π -groups in ion pair bonding. The molecular structure of bis(tetrahydrofuran) sodium (9,10-dihydro-9,10-anthrylene)dimethylaluminate [Na(C₄H₈O)₂]₂[Al(CH₃)₂C₁₄H₁₀]₂, a sodium/trimethylaluminum reduction product of anthracene, D. J. Brauer and G. D. Stucky, *J. Organomet. Chem.* 37, 217-232 (1972)
 43. Electron population analysis of accurate diffraction data. III. Application of one- and two-center formalisms to tetracyanoethylene oxide, D. A. Matthews, G. D. Stucky, and P. Coppens, *J. Am. Chem. Soc.* 94, 8001-8008 (1972)
 44. Bonding and valence electron distribution in molecules. Experimental binding energies and charge distributions in tetracyanoethylene, tetracyanoethylene oxide, tetracyanocyclopropane, cyclopropane, ethylene oxide, and related molecules, G. D. Stucky, D. A. Matthews, J. Hedman, M. Klasson, and C. Nordling, *J. Am. Chem. Soc.* 94, 8009-8015 (1972)
 45. The molecular structures of chelated alkali metal systems in solid state, G. D. Stucky, *Polymer Preprints* 13 (2), American Chemical Society, Div. Polym. Chem., 644-648 (1972)
 46. Charge density distribution in tetracyanoethylene oxide by difference Fourier techniques and population refinement of the diffraction data, D. A. Matthews and G. D. Stucky, *Transactions of the American Crystallographic Association* 8, 113-131 (1972)
 47. Synthetic studies of the reactions of chloroolefins with nickel carbonyl. Dimerization of 1,1,3,3,3-pentachloropropene, J. S. Swanson and G. D. Stucky, *Organometallics in Chemical Synthesis* 1, 467-470 (1972)

48. A π -carbanion Grignard reagent, C. Johnson, J. D. Toney, and G. D. Stucky, *J. Organomet. Chem.* **40**, C11-C13 (1972)
49. Effects of interionic coupling on the electronic spectra of the transition metal ions. The ligand field spectra of CsNiCl_3 and CsNiBr_3 , G. L. McPherson and G. D. Stucky, *J. Chem. Phys.* **57**, 3780-3786 (1972)
50. The crystal and molecular structure of tetramethylammonium 3, 3'-commo-bis[1, 2-dicarba-3-nickela-closo-dodecaborate] (1-), F. V. Hansen, R. G. Hazell, C. Hyatt, and G. D. Stucky, *Acta Chem. Scand.* **27**, 1210-1218 (1973)
51. The crystal structure of CsMnCl_3 and a summary of the structures of RMX_3 compounds, T.-I. Li, G. D. Stucky, and G. L. McPherson, *Acta Cryst. B29*, 1330-1335 (1973)
52. Exchange interactions in polynuclear transition metal complexes. Structural properties of cesium tribromocuprate(II), CsCuBr_3 , a strongly coupled copper(II) system, T.-I. Li and G. D. Stucky, *Inorg. Chem.* **12**, 441-445 (1973)
53. Synthesis and crystal structure of bicyclo[1,1,0]butyllithium tetramethylethylenediamine, R. P. Zerger and G. D. Stucky, *J. Chem. Soc., Chem. Comm.*, 44-45 (1973)
54. Bonding and valence electron distributions in molecules. The crystal and molecular structure of 1,1,2,2-tetracyanocyclopropane, Y. Wang and G. D. Stucky, *Acta Cryst. B29*, 1255-1259 (1973)
55. The effect of exchange coupling on the spectra of transition metal ions. The crystal structure and optical spectrum of CsCrBr_3 , T.-I. Li and G. D. Stucky, *Acta Cryst. B29*, 1529-1532 (1973)
56. Stabilization of the higher oxidation states of nickel. Molecular structure of bis-(2,6-diacetylpyridine-dioximato)nickel(IV), G. Sproul and G. D. Stucky, *Inorg. Chem.* **12**, 2898-2901 (1973)
57. Is squaric acid square? A combined X-ray and neutron diffraction study of 3,4-dihydroxycyclobut-3-ene-1,2-dione, Y. Wang, G. D. Stucky, and J. M. Williams, *J. Chem. Soc., Perkin Trans. 2*, 35-38 (1974)
58. Stereochemical properties of *N*-chelated alkali metal complexes, G. D. Stucky, Chapter 3 in *Polyamine-Chelated Alkali Metal Compounds*, edited by A. W. Langer (Advances in Chemistry Series No. 130), 56-112 (1974)
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