

CURRICULUM VITAE

Subhash C. Goel, Ph.D.

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Personal: Born July 15, 1955 in Amroha, India
Married Wife: Anjula Goel, Two children (sons: Sumit and Amit), Two grandchildren

Education: B. Sc., Agra University, 1973
M. Sc., Ruhilkhand University, 1975
Ph.D., University of Delhi, Delhi, 1980
Thesis Title: "Alkenoxide Derivatives of Various Elements"

Professional History

Aug., 2012 -	Assistant Professor of Chemistry, South GA College, Douglas, GA
1994-2012	Supervisor, Research and Development, Optima Chemicals, Douglas
1988 - 1994	Research Associate, Washington University, St. Louis, MO
1985 - 1988	Postdoctoral Fellow, Georgia Institute of Technology, Atlanta, GA
1980 - 1985	Assistant Professor, Kumaun University, Nainital, India

Awards & Affiliations

President's (Eagle) Scout, 1972
Merit Scholarships, 1965 - 1975
Junior Research Fellowship, CSIR, New Delhi, 1975 - 1977
Senior Research Fellowship, CSIR, New Delhi, 1977 - 1979
Postdoctoral Research Fellowship, CSIR, New Delhi, 1980
Member, American Chemical Society, 1988- present
Chair, Southwest GA Section of American Chemical Society, 1999
Chair, Southwest GA Section of American Chemical Society, 2003
Councilor, Southwest GA Section of ACS, 2012-2014
National Chemistry Week Coordinator, ACS, 1995-present
Member, National Academy of Sciences, India, 1991- present

Research Interests: Synthetic chemistry, process development, alkoxide chemistry, material chemistry

Publications Thirty seven publications in international journals of chemistry

1. Synthesis and Properties of Some Metal Cinnamoxides. **S.C. Goel**, S.K. Mehrotra, and R.C. Mehrotra, *Synth. React. Inorg. Metal-Org. Chem.*, 1977, **7**, 519.
2. Synthesis and Properties of Some Metal Crotyloxides. **S.C. Goel** and R.C. Mehrotra, *Z. Anorg. Allg. Chem.*, 1978, **440**, 281.
3. Methyl Butenoxy Derivatives of Various Elements. **S.C. Goel**, V.K. Singh, and R.C. Mehrotra, *Z. Anorg. Allg. Chem.*, 1978, **447**, 253.
4. Synthesis and Properties of Some Unsaturated Esters of As(III) and Sb(III). **S.C. Goel**, V.K. Singh, and R.C. Mehrotra, *Synth. React. Inorg. Metal-Org. Chem.*, 1979, **9**, 57.
5. Synthesis and Physical Properties of 3-Penten-2-ol Derivatives of Some Elements. **S.C. Goel**, V.K. Singh, and R.C. Mehrotra, *Synth. React. Inorg. Metal-Org. Chem.*, 1979, **9**, 439.
6. Cyclic Compounds of Boron: Alkenoxy Derivatives. **S.C. Goel** and R.C. Mehrotra, *Synth. React. Inorg. Metal-Org. Chem.*, 1980, **10**, 591.
7. Synthesis and Properties of 4-Penten-2-oxide Derivatives of Some Elements. **S. C. Goel** and R.C. Mehrotra, *Synth. React. Inorg. Metal-Org. Chem.*, 1981, **11**, 35.
8. 3-Buten-1-oxy Derivatives of Boron, Aluminum, Germanium, Titanium, Niobium, Tantalum and Tin. **S.C. Goel** and R.C. Mehrotra, *Indian J. Chem.*, 1981, **20A**, 1054.
9. Synthesis and Properties of Some Metal- α -methalloxides. **S.C. Goel** and R.C. Mehrotra, *Indian J. Chem.*, 1981, **20A**, 440.
10. Unsaturated Carboxylates of Al(III). **S.C. Goel**, N.C. Jain, and G.K. Parashar, *Synth. React. Inorg. Metal-Org. Chem.*, 1982, **12**, 739.
11. Synthesis and Characterization of Some Alkenyl Esters of Arsenous and Antimonous Acids. **S.C. Goel** and R.C. Mehrotra, *Synth. React. Inorg. Metal-Org. Chem.*, 1983, **13**, 223.
12. Synthesis and Properties of 2-Hexen-4-oxide Derivatives of Some Tri-, Tetra- and Penta-valent Elements. **S.C. Goel**, *Synth. React. Inorg. Metal-Org. Chem.*, 1983, **13**, 725.
13. Synthesis and Characterization of 3-Methyl-1-penten-3-oxy Derivatives of Aluminum, Germanium, Titanium, Zirconium, Niobium, Tantalum and Mono-, Di- and Tri-butyltin. **S.C. Goel**, *Synth. React. Inorg. Metal-Org. Chem.*, 1985, **15**, 533.
14. Studies on 4-Penten-1-oxy Derivatives of Boron, Aluminum, Germanium, Titanium, Niobium, tantalum and Butyltins, **S.C. Goel**, *Indian J. Chem., Sec. A*, 1985, **24A**, 880.
15. Carbanions 24. Rearrangement of (E)- and (Z)-2,2-Diphenyl-3-pentenylalkali Metal Compounds. E. Grovenstein, Jr., K.W. Black, **S.C. Goel**, R.L. Hughes, J.H. Northrop, D.L. Streeter, and D. VanDerveer, *J. Org. Chem.*, 1989, **55**, 1671.
16. A Soluble Copper (II) Alkoxide for Solution-Based Synthesis of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$. **S.C. Goel**, K.S. Kramer, P.C. Gibbons, and W.E. Buhro, *Inorg. Chem.*, 1989, **28**, 3619.
17. Preparation and X-ray Crystal Structures of Volatile Cu(II) Alkoxides. **S.C. Goel**, K.S. Kramer, M.Y. Chiang,

and W.E. Buhro, *Polyhedron*, 1990, **9**, 611.

18. The First Square-Planar Complex of Cd(II): Cd(OAr)₂(THF)₂ where OAr = 2,6-Di-*tert*-butylphenoxide. A Structure Governed by Two Strong and Two Dative Bonds. **S.C. Goel**, M.Y. Chiang, and W.E. Buhro, *J. Am. Chem. Soc.*, 1990, **112**, 6724.
19. Synthesis of Homoleptic Silylphosphido Complexes {M[P(SiMe₃)₂][$\dot{\text{i}}$ -P(SiMe₃)₂]₂ Where M = Zn and Cd and Their Use in Metalloorganic Routes to Cd₃P₂ and MGeP₂ (M = Zn and Cd). **S.C. Goel**, M.Y. Chiang, and W.E. Buhro, *J. Am. Chem. Soc.*, 1990, **112**, 5636.
20. Preparation of Six Lead (II) Dialkoxides, and the X-ray Crystal Structures of [Pb($\dot{\text{i}}$, ζ^1 -OCH₂CH₂OMe)₃] _{∞} and [Pb₃(O-*t*-Bu)₆], and hydrolysis studies. **S.C. Goel**, M.Y. Chiang, and W.E. Buhro, *Inorg. Chem.*, 1990, **29**, 4640.
21. Preparation of Soluble and Volatile Zinc Alkoxides. X-ray Crystal Structures of an (Amido)zinc Alkoxide and a Homoleptic Zinc Enolate: {Zn($\dot{\text{i}}$ -OCe₃)[N(SiMe₃)₂]₂ and Zn(1,4,7- ζ^3 -OCH=CHNMeCH₂CH₂NMe₂). **S.C. Goel**, M.Y. Chiang, and W.E. Buhro, *Inorg. Chem.*, 1990, **29**, 4646.
22. A Very Large Calcium Dialkoxide Molecular Aggregate Having a CdI₂ Core Geometry: Ca₉(OCH₂CH₂OMe)₁₈(HOCH₂CH₂OMe)₂. **S.C. Goel**, M.A. Matchett, M.Y. Chiang, and W.E. Buhro, *J. Am. Chem. Soc.*, 1991, **113**, 1844.
23. Conformational Dichotomy and Pyramidalized Carbonyl Groups in Zinc-Aldolate Chelates Obtained from Aldol Condensations of Ketones: Crystallographic Characterization of {[(Me₃Si)₂N]Zn[$\dot{\text{i}}$, ζ^2 -OCR¹(CH₂R²)-CHR²C(O)R¹]₂. **S.C. Goel**, M.Y. Chiang, and W.E. Buhro, *J. Am. Chem. Soc.*, 1991, **113**, 7069.
24. Synthesis, Reactivity and X-Ray Crystallographic Characterization of Chloro(propan-2-ol)bis(tetra-isopropoxoaluminato)praseodymium(III) Dimer, [Pr{Al(OPr-*i*)₄]₂(Pr-*i*-OH)($\dot{\text{i}}$ -Cl)₂]. U.M. Tripathi, A. Singh, R.C. Mehrotra, **S.C. Goel**, M.Y. Chiang, and W.E. Buhro, *J. Chem. Soc., Chem. Commun.*, 1992, 152.
25. Carbanion 26. Formation of Hexadienyl Anions by the Reactions of Various Hexadienes with Cs Solutions in the Presence of 18-Crown-6 or with *n*-BuLi-Cesium-*t*-Butoxide. **S.C. Goel** and E. Grovenstein, Jr. *Organometallics*, 1992, **11**, 1565.
26. New Chemistry for the Sol-Gel Process: Acetone as a New Condensation Reagent. **S.C. Goel**, M.Y. Chiang, P.C. Gibbons, and W.E. Buhro, *Better Ceramics Through Chemistry V* (Mater. Res Soc. Proc.), 1992, **271**, 3.
27. The ³¹P NMR Spectra of Cd₃P₂ and Zn₃P₂. N.L. Adolphi, R. D. Stoddard, **S.C. Goel**, W.E. Buhro, P.C. Gibbons, and M.S. Conardi, *J. Phys. Chem. Solids*, 1992, **53**, 1275.
29. Homoleptic Disilylphosphido Complexes {M[P(SiR₃)₂]_x]_n and Their Use as Precursors to Phosphide Semiconductor Nanoclusters. **S.C. Goel**, M.Y. Chiang, M.A. Matchett, and W.E. Buhro *Phosphorus, Sulfur, and Silicon*, 1993, **76**, 289.
30. Comparing the Properties of Homologous Phosphido and Amido Complexes; the Synthesis and Characterization of the Disilylphosphido Complexes {M[P(SiMe₃)₂]₂ where M = Zn, Cd, Hg, Sn, Pb, and Mn. **S.C. Goel**, M.Y. Chiang, D.J. Rauscher, and W.E. Buhro, *J. Am. Chem. Soc.*, 1993, **115**, 160.
31. Low-Temperature Organometallic Synthesis of Crystalline and Glassy Ternary Semiconductors M^{II}M^{IV}P₂ Where M^{II} = Zn and Cd, and M^{IV} = Ge and Sn. **S.C. Goel**, W.E. Buhro, N.L. Adolphi and M.S. Conradi, *J. Organomet. Chem.*, 1993, **249**, 9.

32. Structural Characterization of Phosphide and Related Semiconductor Nanoclusters. **S.C. Goel**, A.M. Viano, P.C. Gibbons, M.A. Matchett, and W.E. Buhro. *Nanostructured Materilas*, 1993, **3**, 239.
33. Solution-Liquid-Solids Growth of Crustalline III-V Semiconductors: An Analogy to Vapor-Liquid-Solid Growth. **S.C. Goel**, T.J. Trentler, K.M. Hickman, A.M. Viano, P.C. Gibbons, and W.E. Buhro. *Science*, 1995, **270**, 1791
34. Solution-Liquid-Solids Growth of Indium Phosphide Fibers from Organomettalic Precursors: Elucidation of Molecular and Nonmolecular Component of the Pathways. **S.C. Goel**, T.J. Trentler, K.M. Hickman, A.M. Viano, M.Y. Chiang, A.M. Betty, P.C. Gibbons, and W.E. Buhro. *J. Am. Chem. Soc.*, 1997, **119**, 2172.
35. Copper(II) Alkoxides. **S.C. Goel**, Buhro, W.E. *Inorg. Synth.* 1997, **31**, 294.
36. Preparation of Volatile Molecular Lithium–Niobium Alkoxides. Crystal Structures of $[\text{Nb}(\mu\text{-OCH}_2\text{SiMe}_3)(\text{OCH}_2\text{SiMe}_3)_4]_2$ and $[\text{LiNb}(\mu_3\text{-OCH}_2\text{SiMe}_3)-(\mu_2\text{-OCH}_2\text{SiMe}_3)_2(\text{OCH}_2\text{SiMe}_3)_3]_2$. **S.C. Goel**, J.A. , Hollingsworth, A.M. Beatty, K.D. Robinson, W.E. Buhro. *Polyhedron* 1998, **17**, 781.
37. A Practical Preparation of 2-Carboxyphenylboronic Acid and Its Application for Preparation of Biaryl-2-carboxylic Acids using Suzuki Coupling Reactions. **S.C. Goel**, B. Tao, J. Singh, and D.W. Boykin *Synthesis*, 2002, **8**, 1043.