

## George E. Shankle

### Education:

B.A. 1964, University of Tennessee Martin Branch (Chemistry)  
Ph.D. 1969, University of Tennessee, Knoxville (Physical Chemistry)

### Professional Experience:

1964-65 Teaching assistant, University of Minnesota  
1965-67 Teaching assistant, University of Tennessee  
1969-70 Instructor, University of Illinois at Chicago Circle  
1970-99 Asst./Associate/Full Professor of Chemistry,  
Angelo State University  
1999-2000 Interim Dept. Head, Dept. of Chemistry and Biochemistry  
2000-2008 Department Head

### Memberships:

Sigma Xi

### Awards/Appointments:

Oak Ridge Associated Universities Faculty Research Participant, Summers  
1972, 1973, 1975  
Angelo State University Organized Research Grant: Summers, 1974, 1976,  
1986  
National Science Foundation Summer Research Fellowship in Analytical  
Chemistry, 1987, University of Tennessee, Group leader: Dr. Gleb  
Mamantov  
Jessie Ball duPont Faculty Professional Enrichment Program, Summer 1988  
and 1990, Florida State University, Group leader: Ronald L. Clark  
Appointed Visiting Associate Professor of Chemistry, University of  
Tennessee, Summer, 1989. Teaching/research dual appointment.  
Angelo State University Faculty Enrichment Program, Summer 1991.  
Appointed Visiting Professor of Chemistry, University of Maine, Summer, 1992.

### Research Interests:

Low-temperature optical absorption and fluorescence of transition metal  
salts, NMR imaging  
Spectroscopy of gemstones

### Representative Publications:

1. Mohammad A. Omary, Derek R. Hall, George E. Shankle, Aleksander Siemiarczuk, and Howard H. Patterson, "Luminescent Homoatomic Exciplexes in Dicyanoargentate(I) Ions Doped in Alkali Halide Crystals. 2. "Exciplex Tuning" by Varying the Dopant Concentration" J. Phys. Chem. B, 103 (1999), 3845-3853.

2. M.A. Omary, T.R. Webb, Z. Assefa, G.E. Shankle, and H.H. Patterson, "Crystal Structure Electronic Structure, and Temperature-Dependent Raman Spectra of  $\text{Ti}[\text{Ag}(\text{CN})_2]$ : Evidence for Ligand-Unsupported *Argentophilic* Interactions", *Inorganic Chemistry*, **37**(6) 1380-1386 (1998)
3. S.D. Williams, W. Harper, G. Mamantov, L.J. Tortorelli, and G. Shankle, "Ab Initio MO Study of Selected Aluminum and Boron Chlorides and Fluorides: Comparisons with  $^{11}\text{B}$  NMR Spectra of a Tetrachloroborate Melt", *J. Comp. Chemistry*, **17** (15) 1696-1711 (1996)
4. M.A. Omary, H.H. Patterson, and G. Shankle, "Photoluminescence and Electronic Structure Studies to Probe Metal-Metal Interactions in Thallium Dicyanoargentate(I): A New Low Dimensional Solid State Class", *Mol. Cryst. Liq. Cryst.* **284**, 399-409 (1996).
5. (co-author) "(Europium(III) Tris[dicyanoargentate(I)],  $\text{Eu}[\text{Ag}(\text{CN})_2]_3 \cdot 3\text{H}_2\text{O}$  Acta Cryst. (1995) **C51**,
6. (co-author) "Synthesis of High Temperature Superconducting Ceramics by Oxalate Coprecipitation from Non-aqueous Solvents", *Appl. Supercond.* (1994) **2** (2), 127-33.
7. (co-author) "Photoluminescence of Gold(I) and Silver(I) Complexes of Gold and Silver Dicyanides: A New Low-Dimensional Solid-State Class for Nonradiative Excited State Energy Transfer." *Inorganic Chemistry* **33** (1994) 345.
8. (co-author) "Light-Induced Electron Transfer in  $\text{Pb}[\text{Au}(\text{CN})_2]_2$ ." *Inorganica Chimica Acta* **226** (1994) 345.
9. Harlan, H.D., D.G. Tarter, and G.E. Shankle, "Quantitative Analysis" Lab Manual for General Chemistry, Angelo State University, 1984, 1991, 1993, 1995.
10. G.E. Shankle and H.W. Peterson, "Laboratory Manual for Chemistry 1411", Lab Manual for General Chemistry, Angelo State University, 1986, 1992, 1995.
11. Texas A&M University Thermodynamics Research Center Hydrocarbon project. Selected Nuclear Magnetic Resonance Spectral Data, Supplementary Vol. F-26, April 30, 1982, Spectra 1075-1090.
12. "The Electronic and Vibrational Spectra of  $\text{trans}[\text{NiCl}_4(\text{H}_2\text{O})_2]^{2-}$  Anions in Crystalline  $\text{Rb}_2\text{NiCl}_4 \cdot 2\text{H}_2\text{O}$  and the Effective Symmetry of Mixed-Ligand Nickel(II) Complexes", *The Journal of Chemical Physics*, **64** (1976), 2539-2548.
13. "Low-Temperature Magnetic Characteristics of Tetrahedral  $\text{CoCl}_4^{2-}$  I g-Tensor Orientation in Doped  $[(\text{C}_2\text{H}_5)_4\text{N}]_2\text{ZnCl}_4$ ." *The Journal of Chemical Physics*, **56** (1972) 3750-3754.