# Biographical Sketch of Gary W. Beall

***Dr. Gary W. Beall*** (Texas State University, College of Sciences) has a Ph.D. in Physical Chemistry from Baylor University. Dr. Beall's first job out of graduate school was at Oak Ridge National Laboratory where he conducted research on the environmental fate of actinides originating from the civilian nuclear fuel cycle. He then moved to industry for 21 years during which he served as researcher, group leader, technical director, and vice president for a number of different companies and also founded his own company. The central theme of the research conducted during this period was applications of surface modified clay nanoparticles in paint, cosmetics, grease, pharmaceuticals, cat litter, water treatment, and polymers. He has over 60 publications in refereed journals and 48 US patents in his name. Dr. Beall co-edited the first book written on polymer/clay nanocomposites in 2000 and just published the second on the subject in 2011 coauthored with Dr. Clois Powell. Dr. Beall is well known for his work on nanoparticles (especially smectic type of nanoparticles) and their surface modification and application in a multitude of application areas. Recent research interests include low cost synthesis of graphenes and other 2-D systems. He is currently Full Professor in the department of Chemistry and Biochemistry, Formosa Endowed Chair, Director of the Center for Nanophase Research, Associate Director of the Materials Science, Engineering, and Commercialization program, and Associate Dean of Research and Commercialization for the College of Science at Texas State University. Dr. Beall is also currently serving as an Adjunct Professor at Lamar University in the department of Chemical Engineering, science advisor and adjunct professor for Al-Farabi Kazakh National University, and Distinquished adjunct professor for King Abdulaziz University, SA. He is also founder and CTO of National Nanomaterials Inc.

## *Education and Training*

Ph.D. (Physical Chemistry) Baylor University, 1975.

M.S. (Physical Chemistry) Baylor University, 1974.

B.S. (Chemistry) Tarleton State University, 1972.

## *Research and Professional Experience*

**University Experience**

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|---|---|---|
| Formosa Professor | Texas State University | 2011-present |
| Assoc. Dean of Res, & Comm. CoS | Texas State University | 2010-present |
| Presidential Fellow | Texas State University | 2009-2010 |
| Adjunct Professor | Lamar University | 2009-present |
| Science Advisor | Al Farabi Kazakh Natl. University | 2007-present |
| Associate Director MSE | Texas State University | 2008-present |
| Associate Professor | Texas State University | 2005-present |
| Assistant Professor | Texas State University | 2001-2005 |
| Associate Professor | Missouri Baptist College | 1999-2001 |
| Welch post-doctoral | Fellow Baylor University | 1975-1977 |

**Professional Experience**

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|---|---|---|
| Chief Technical Officer | National Nanomaterials Inc. | 2011-Pres. |
| Vice President/ Tech. Director | Amcol International, Inc. | 1992-1999 |
| Vice President of Technical | Technical Minerals Inc. | 1987-1992 |
| Technical Director | United Catalysts Inc. | 1984-1987 |
| Manager of Geosciences | Weston, Inc. | 1983-1984 |

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|---|---|---|
| Senior Scientist/Vice President | Radian Corp./Radecca, Inc. | 1979-1983 |
| Staff Research Scientist | Oak Ridge National Laboratory | 1977-1979 |

## *Selected Publications*


1. Duraia, El Shazly, M. A.; Mansurov, Z.; Tokmolden, S. Beall, Gary W., “Preparation of highly aligned silicon oxide nanowires with stable intensive photoluminescence” Physica: B (2010), 405(4), 1176-1180.

2. Duraia, El Shazly, M. A.; Mohamedbakr, H.; Mansurov, Z.; Beall, Gary W., “ Growth of Carbon Nanotubes on Diatomite”, Vacuum (2009), 84(40, 464-468.

3. Ilyin, A. M.; Daineko, E. A.; Beall, G. W.. “Computer Simulations and Study of Radiation Defects in Graphene” Physica E: Low-dimensional Systems and Nanostructures, 42 (2009) pp.67-69

4. Adame, Daniel; Beall, Gary W., “ Direct measurement of the constrained polymer region in polyamide/clay nanocomposites and the implications for gas diffusion.” Applied Clay Science (2009), 42(3-4), 545-552.

5. Beall, Gary W.; Sowersby, Drew S.; Roberts, Rachel D.; Robson, Michael H.; Lewis, L. Kevin. “ Analysis of Oligonucleotide DNA Binding and Sedimentation Properties of Montmorillonite Clay Using Ultraviolet Light Spectroscopy.” Biomacromolecules (2009), 10(1), 105-112.

6. Furman, Benjamin R.; Wellinghoff, Stephen T.; Thompson, Paul M.; Beall, Gary W.; Laine, Richard M.; Rawls, H. Ralph. -Zirconium Phosphonates with Ether-Functional Surfaces.” Chemistry of Materials (2008), 20(17), 5491-5499.

7. Ji, Chang; Day, Shannon E.; Ortega, Stephanie A.; Beall, Gary W., “ Henry's Law Constants of Some Aromatic Aldehydes and Ketones Measured by an Internal Standard Method.” Journal of Chemical & Engineering Data (2008), 53(5), 1093-1097.

8. J. Bartels, G. W. Beall, M. Grah, K. Jin, D. Speer, J. Yarbrough, “Intercalated clays from pentaerythritol stearates for use in polymer nanocomposites” J. Applied Polymer Sci., 3, (2008), 1908-1916

9. Gary W. Beall, Clois E. Powell, Jesse Hancock, Megan Kindinger, Heather R. McKenzie, Alan V. Bray and Chad J. Booth, “Physical properties of CBDO based co-polyterephthalate nanocomposites” Applied Clay Science ,37, (2007), 295-306

10. Powell, Clois E.; Beall Gary W., “Physical Properties of polymer/ Clay Nanocomposites” Current Opinion in Sol. State & Mat. Sci. (2006), 10(2), 73-82