



## Robert (Bob) C. Johnson, Ph.D.

Technical Specialist

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Robert Johnson joined Marshall Gerstein in 2021 as a Technical Specialist assisting in preparing and prosecuting patents for the firm's chemical sciences clients. As a chemist by trade, Bob has an extensive background in chemistry and materials science, particularly in polymers and nanoscale materials. His career has included roles in product development and scale-up in the coatings, dispersants, ion exchange resin, and crop protection industries, and he is excited about leveraging this experience to generate value for the firm's clients. Outside of work, Bob enjoys watching and playing soccer, geocaching, and spending time with family.

### Practices

- Patent Prosecution

### Industries

- Chemical Sciences

### Representative Experience

Bob has extensive experience in the following areas:

- Chemistry, materials science, and nanotechnology
- Polymer synthesis, characterization, and applications
- Agricultural chemicals and formulations
- Nanoscale materials
- Coatings, adhesives, and additives
- Ion exchange resins

## Background and Credentials

Prior to joining Marshall Gerstein, Bob held positions in R&D and new product scale-up at Rohm and Haas, Dow Chemical, and Corteva Agriscience. After obtaining his Ph.D. in chemistry from Northwestern University, where his research was focused on measuring optical properties of nanoscale materials, Bob was a postdoctoral associate within the Department of Chemistry at The Pennsylvania State University. He has been a member of the American Chemical Society for more than two decades and is co-inventor on five patents.

## Education

- Northwestern University (Ph.D.)
  - Physical Chemistry
- Northwestern University (M.S.)
  - Chemistry
- Miami University (B.S.)
  - Chemistry
  - Mathematics

## Community and Professional Involvement

- Member, American Chemical Society

## Publications

- K. D. Benkstein, C. L. Stern, K. E. Splan, **R. C. Johnson**, K. A. Walters, F. W. M. Vanhelfmont, J. T. Hupp. "Collapsed molecular rectangles based on rhenium(I) coordination of ethynylpyridyl porphyrins – synthesis, structure, and bending-induced charge transfer behavior." *Eur. J. Inorg. Chem.*, 2002, 2818.
- R. R. Toczyłowski, **R. C. Johnson**, S. M. Cybulski. "An ab initio study of the potential energy surface of NH<sub>3</sub>-CO." *J. Mol. Struct. (Theochem)*, 2002, 591, 77.
- E. C. Hao, G. C. Schatz, **R. C. Johnson**, J. T. Hupp. "Hyper-Rayleigh scattering from silver nanoparticles." *J. Chem. Phys.*, 2002, 117, 5963.
- **R. C. Johnson**, J. Li, J. T. Hupp, G. C. Schatz. "Hyper-Rayleigh scattering studies of silver, copper, and platinum nanoparticle suspensions." *Chem. Phys. Lett.*, 2002, 356, 534.
- Y. Kim, **R. C. Johnson**, J. Li, J. T. Hupp, G. C. Schatz. "Synthesis, linear extinction, and preliminary resonant hyper-Rayleigh scattering studies of gold-core/silver-shell nanoparticles: comparisons of theory and experiment." *Chem. Phys. Lett.*, 2002, 352, 421.
- B. J. Coe, J. A. Harris, I. Asselberghs, K. Clays, G. Olbrechts, A. Persoons, J. T. Hupp, **R. C. Johnson**, S. J. Coles, M. B. Hursthouse, K. Nakatani. "Quadratic nonlinear optical properties of N-aryl stilbazolium dyes." *Adv. Funct. Mat.*, 2002, 12, 110.

- S. E. Miller, Y. Y. Zhao, R. Schaller, V. Mulloni, E. M. Just, **R. C. Johnson**, M. R. Wasielewski. "Ultrafast electron transfer reactions initiated by excited CT states of push-pull perylenes." *Chem. Phys.*, 2002, 275, 167.
- Y. Kim, **R. C. Johnson**, J. T. Hupp. "Gold nanoparticle-based sensing of 'spectroscopically silent' heavy metal ions." *Nano Letters*, 2001, 1, 165.
- **R. C. Johnson**, J. T. Hupp. "How far do electrons move? A semiempirical investigation of thermal electron transfer distances in cationic bis(hydrazine) and bis(hydrazyl) mixed-valence compounds." *J. Am. Chem. Soc.*, 2001, 123, 2053.
- J. P. Novak, L. C. Brousseau, F. W. Vance, **R. C. Johnson**, B. I. Lemon, J. T. Hupp, D. L. Feldheim. "Nonlinear optical properties of molecularly bridged gold nanoparticle arrays." *J. Am. Chem. Soc.*, 2000, 122, 12029.
- R. Shediach, M. H. B. Gray, H. T. Uyeda, **R. C. Johnson**, J. T. Hupp, P. J. Angiolillo, M. J. Therien. "Singlet and triplet excited states of emissive, conjugated bis(porphyrin) compounds probed by optical and EPR spectroscopic methods." *J. Am. Chem. Soc.*, 2000, 122, 7017.
- F. W. M. Vanhelmont, **R. C. Johnson**, J. T. Hupp. "An inorganic application of transient DC photoconductivity: corroboration of a charge-transfer assignment for the luminescing states of Pt(dpphen)(ecda)." *Inorg. Chem.*, 2000, 39, 1814.
- **R. C. Johnson**, T. D. Power, J. S. Holt, B. Immaraporn, J. E. Monat, A. A. Sissoko, M. M. Yanik, A. V. Zagorodny, S. M. Cybulski. "Electron-correlated calculations of electric properties of nucleic acid bases." *J. Phys. Chem.*, 1996, 100, 18875.