Dr. C. Michael Roland

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Dr. C. Michael Roland is a Senior Scientist for Soft Matter Physics at the U.S. Naval Research Laboratory (NRL). His research is concerned primarily with the dynamics of condensed matter, including polymers and liquid crystals, with application to military armor, infrastructure protection, and non-lethal weapon systems.

He received a Bachelor of Science degree (*magna cum laude*) from Grove City College in 1974 and a Ph.D. from the Pennsylvania State University in 1980, both in chemistry. His doctoral research concerned the application of nonlinear Raman scattering to characterize molecular motions in dense liquids. He spent six years at the Central Research Laboratories of the Firestone Tire & Rubber Co., before joining NRL in 1986. From 1989 to 2015, he was the Head of the Polymer Physics Section in the Chemistry Division at NRL. Roland has served as a technical and litigative consultant for 15 companies and the Dept. of Justice.

Roland has over 400 peer-reviewed scientific papers and 12 book chapters, which have been cited more than 13,000 times (Hirsch-index = 69 per Google Scholar). He authored the book *Viscoelastic Behavior of Rubbery Materials*, published by Oxford Univ. Press in 2011. Roland holds 22 U.S. patents. He is a Fellow of the American Physical Society and the Institute of Materials, Minerals, and Mining, and in 2012 was awarded the Charles Goodyear Medal from the Rubber Division of the American Chemical Society. Roland has received 7 NRL Research Publication (Berman) Awards, 2 NRL Patent (Edison) Awards, an NRL Technology Transfer Award, the E.O. Hulburt Science Award, and the Sigma Xi Award for Pure Science.

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