

Nicholas J. Turro



Photograph taken by Sandy Turro

Nicholas J. Turro was born in Middletown, Connecticut, on May 18, 1938. Remaining in Middletown, he received his B.A. degree *summa cum laude* from Wesleyan University in 1960. He attended graduate school at Caltech where he received his Ph.D. degree with G. S. Hammond in 1963, during the blossoming of the new field of mechanistic organic photochemistry in the Hammond group. Following a postdoctoral year at Harvard with P. D. Bartlett, he joined the faculty at Columbia University where today he is the Wm. P. Schweitzer Professor of Chemistry. He is the author of over 600 scientific papers and two influential books, *Molecular Photochemistry* published in 1965 and *Modern Molecular Photochemistry* published in 1978. His scientific accomplishments have been recognized by numerous awards, lectureships, and honorary degrees. Among these are election to the National Academy of Sciences, the Porter Medal, and several American Chemical Society awards including the Award in Pure Chemistry, the James Flack Norris Award, and the Cope Scholar Award.

Turro's research interests have centered on organic photochemistry with a focus that has evolved with time from molecular to supramolecular. He was among the first to broadly apply the methods of kinetic spectroscopy to the study of photochemical and chemiluminescent reactions mechanisms. Early targets of investigation included acyclic and cyclic ketones and dioxetanes. He was a pioneer in the study of photochemical reactions in organized media such as micelles and zeolites, first investigating the effects of such media on photochemical reactions and then using photochemistry to probe the environment. Investigations of cage effects and magnetic field effects on the behavior of photochemically generated radical pairs have revealed remarkable radical pair phenomena, including isotopic separations induced by differential hyperfine interactions. Synthetic polymers, dendrimers, and biopolymers including DNA have also fallen within the scope of his investigations.

No less impressive are Turro's accomplishments as an educator. He has served as mentor to dozens of graduate students and postdocs. As a newly arrived postdoc in 1968, I was presented with a thick black binder containing 100 key papers dealing with spectroscopy and photochemistry. Group meetings typically lasted half a day and occasionally were

expanded into day-long mini-symposia with guests from academic and industrial laboratories. Journal reading was mandatory and attendance at ACS meetings and Gordon Conferences was expected. Research productivity did not come at the expense of education in the Turro group. Productivity was, of course, strongly encouraged by frequent whirlwind visits to the laboratory from "Nick-the-Flash" (as he was affectionately known) and copious suggestions for new experiments (known in the group as "why-don't-yas"). Generations of Columbia undergraduates have also benefited from Turro's dynamic classroom presentations, educational innovations, and departmental leadership.

Both as a scientist and a teacher, Turro has sought to develop simple models for complex phenomena. The model is intended as a stimulus for thought, research, and debate—not as irrefutable dogma. In collaboration with Bill Dauben and Lionel Salem, he helped popularize the use of potential energy surfaces to explain photochemical reactivity. His second book spread the gospel. Having played a key role in the development molecular photochemistry, he became a prime mover in the emerging field of supramolecular photochemistry. His lectures are enlivened with colorful illustrations and language: what listener will forget the roach motel or paradigm shift? As a teacher, mentor, collaborator, and lecturer he has influenced the thinking of photochemists for over three decades.

No description of Nick's career would be complete without mention of his family. Nick and Sandy met in kindergarten and were married following graduation from college. Group gatherings always included Sandy, who found time even while raising their two daughters to take an interest in Nick's students and their families. Now that their daughters have their own families, Sandy frequently travels with Nick and her's is a familiar face to most photochemists.

A 60th birthday is an occasion to reflect upon the past and to look to the future. Nick's many friends and students congratulate him on his accomplishments and look forward to his continued leadership in photochemical science. We eagerly anticipate new accomplishments, new paradigms, and a third influential book.

Frederick D. Lewis
Northwestern University