CURRICULUM VITAE

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Place and date of birth

Athens, Greece, December 31, 1946

Education – Degrees

Gymnasium: Athens College, Athens, June 1965
University: Amherst College, Amherst, Mass. USA
BA in Chemistry, June 1968
Yale University, New Haven, Conn., USA
PhD in Theoretical Chemistry, June 1971

Academic – professional career

My academic-professional career started at Yale University, first as a post-doc in the Chemistry Department (1971-1972) and then as a,

* Lecturer (1972-1973) and Assistant Professor (1973-1975) in the Department of Applied Science and Engineering.

Upon a NORDITA award in 1975, and having served in the Greek army for three months, I spent nine months as a,

* NORDITA visiting Professor, (January - October 1976), Research Institute of Physics, Stockholm, Sweden.

Also in 1975, I accepted the invitation by the governing board of the National Hellenic Research Foundation, Athens, to become the Director of a new research Institute in Greece, with the name Theoretical Chemistry Institute. In 1979, this institute, under my directorship, initiated an expansion into new experimental areas and was renamed, Theoretical and Physical Chemistry Institute, its current name.

So, my academic-professional career has since continued in Greece as follows:

* **Today**, (September 2013), I am retired Professor of Physics from the National Technical University of Athens, and Director of research, Emeritus, at the Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation.

Academic appointments in Greece:

* October 1976- February 1995, Institute Director, Director of Research, Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece.
* 1982- 1984, visiting Professor of Physics, University of Crete, Greece
* 1985-1987, Professor of Physics, University of Crete, Greece
* 1987 - December 2007 (resigned), Professor of Physics, National Technical University of Athens

Also, at times during the period 1980 - 1998, I held short-term (two months to an academic year) visiting scholar appointments (teaching and/or research) at Amherst College, (USA), MIT, (USA), Trømso Univ., (Norway), Imperial College (UK).

Research activity and contributions

Theory and computation (and interpretation of, and comparison with, experiments) in various areas of Quantum Chemistry and of Atomic, Molecular, Chemical and Optical Physics. Development and implementation of non-perturbative time-independent and time-dependent quantum mechanical frameworks, in conjunction with the computation and use of state-specific wavefunctions. Results that provide quantitative understanding of a variety of properties and dynamics of many-electron excited states in the discrete and in the

continuous spectrum, including negative ions, in the absence or presence of external weak or strong electromagnetic fields. Rates and time-dependent probabilities of processes driven by absorption of one or of many photons. Formalism and computation of resonance (autoionizing, predissociating) states. Also, study of classical-quantum correspondence using analysis based on non-linear Classical Dynamics.

Other activities linked to my academic profession:

Member of governing and of scientific boards of European and Greek Institutions, member of scientific committees, member of the editorial board of journals. Lectures at conferences and at Universities and Research Institutes in most countries of Europe, in USA, in Canada, in Russia, in Israel and in China. Some of my research activities have been supported by grants from European programs, from Greek programs, from the US NSF and from the US Air Force.

EXTERNAL FUNDING

Principal investigator and Coordinator for research projects funded by the Ministry of Education and by the National Technical University.

CONFERENCES AND INVITED TALKS

Invited speaker at a large number of Universities of the United States, Europe, Middle East and Asia, as well as at a large number of international conferences and symposia.

ORGANISER OF INTERNATIONAL CONFERENCES

Four international conferences on electronic structure and dynamics and on atomic, molecular and optical physics: 1974, Yeshiva University, New York; 1978, NATO ASI, Island of Kos, Greece; 1988, NATO ASI, Island of Kos, Greece; 1996, 3rd South European Conference on Atomic and Molecular Physics, Island of Kos.

TEACHING ACTIVITIES

Since 1973, courses at Yale University, Amherst College, University of Crete, National Technical University of Athens. Undergraduate and graduate regular courses: Quantum Mechanics, Classical Mechanics, Structure of Matter, Quantum Chemistry, Atomic and Molecular Physics.

PUBLICATIONS

More than 330 scientific articles in refereed journals and books.
(Co)Editor of the books: "Quantum Chemistry of Excited States" Reidel (1979); "The Concept of Probability" Kluwer (1989); "Atoms in Strong Fields" Plenum (1990).
"Unstable States in the Continuous Spectrum. Part I. Analysis, Concepts, Methods and Results" (2010). "Unstable States in the Continuous Spectrum. Part II. Interpretation, Theory and Applications."(2012).

Recent review articles

The three recent review articles (2010, 2011) cited below describe characteristic aspects of my research work.

C. A. Nicolaides, Adv. Quantum Chem. 60, 163 (2010).
"Theory and Many-Electron Computation of Field-Free and Field-Induced Unstable States in Atoms and Molecules".

Th. Mercouris, Y. Komninos and C. A. Nicolaides, Adv. Quantum Chem. 60, 333 (2010).
"The State-Specific Expansion Approach and its Application to the Quantitative Analysis of Time-Dependent Dynamics in Atoms and Small Molecules".

C. A. Nicolaides, Adv. Quantum Chem. 62, 35 (2011).
"State- and Property-Specific Quantum Chemistry".