**CRISTOFOR I. SIMIONESCU, FOUNDER OF THE ROMANIAN
SCHOOL OF MACROMOLECULAR CHEMISTRY**

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ABSTRACT

Prof. Cristofor I. Simionescu was born in Dumbraveni, County of Suceava, Bucovina, Romania on July 17, 1920 and passed away in Jassy on August 6, 2007. He graduated from the Polytechnic Institute of Jassy in 1944, obtained the Doctoral Degree in Technical Sciences from the same institution in 1948 and served as a faculty member in Jassy for over fifty (50) years. He held various other positions including Rector, Vice-President and President of the Academy of Romania and Director of the "Petru Poni" Institute of Macromolecular Chemistry. He has supervised more than one hundred (100) doctoral dissertations, published over eight hundred (800) scientific papers and authored or co-authored more than twenty seven (27) books. He was a member of many academies and learned societies throughout the world, Editor of many scientific journals and received many prizes and awards. Prof. Cristofor I. Simionescu served on the Editorial Board of many international scientific periodicals, including the Southern Brazilian Journal of Chemistry. He is generally considered the father of macromolecular chemistry in Romania.

KEY WORDS: History of Chemistry, Science in Romania, Macromolecular Chemistry, Polymer Science

RESUMO

Prof. Cristofor I. Simionescu nasceu em Dumbraveni, Contado de Suceava, Bucovina, Romênia em 17 de Julho de 1920 e faleceu em Iasi em 6 de Agosto de 2007. Formou-se em Química Industrial no Instituto Politécnico de Iasi em 1944, obteve título de Doutor em Ciências Técnicas da mesma instituição em 1948 e fez parte do corpo docente em Iasi por mais de cinquenta (50) anos. Ocupou muitos cargos, incluindo Reitor, Vice-Presidente e Presidente da Academia da Romênia e Diretor do Instituto de Química Macromolecular "Petru Poni". Orientou mais de cem (100) teses de doutorado, publicou mais de oito centos (800) trabalhos científicos e foi autor ou co-autor de mais de vinte sete (27) livros. Ele foi membro de muitas academias e sociedades científicas do mundo inteiro, Editor de muitas revistas científicas e recebeu muitos prêmios e homenagens. Prof. Cristofor I. Simionescu fez parte do Corpo Editorial de muitas revistas científicas internacionais incluindo Southern Brazilian Journal of Chemistry. Ele é geralmente considerado o pai da química macromolecular na Romênia.

PALAVRAS CHAVE: História da Química, Ciência na Romênia, Química Macromolecular, Polímeros

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Professor Cristofor I. Simionescu was born in Dumbraveni, County of Suceava, Bucovina, Romania on July 17, 1920 and passed away in Jassy on August 6, 2007.

He came from a modest family and both of his parents were school teachers. He attended primary school in Dumbraveni and secondary school in Suceava and the National Lyceum in Jassy.

Cristofor I. Simionescu began his university studies at the Faculty of Chemical Engineering of the Polytechnic Institute of Jassy and graduated "*magna cum laude*" in 1944. He obtained the Doctor of Technical Sciences Degree from the same institution in 1948. His doctoral thesis, in the field of organic technology, dealt with properties of oils extracted from plants growing in Romania.

Cristofor Simionescu passed most of his academic life at the Polytechnic Institute of Jassy (now called the "Gh. Asachi" Technical University). He held the positions of Graduate Assistant (1943), Assistant Professor (1944-1948) and Associate Professor (1948-1951). In 1951 he was promoted to Full Professor and appointed to the Chair of Natural and Synthetic Macromolecules. He served as Chairman of the Department for more than thirty five (35) years and retired in 1995.

Professor Cristofor I. Simionescu was the founder of the School of Macromolecular Chemistry and Polymer Science in Romania. He introduced the teaching of formal courses in 1948 and a year later he established the Section of Cellulose, Paper and Artificial Yarns at the Faculty of Chemical Engineering of the Polytechnic Institute of Jassy.

He began studies dealing with wood, lignin, reed from the Danube Delta and special types of paper. Together with his collaborators, he studied the synthesis and modification of polymers through mechanochemical reactions and by plasma induction. Other areas of research included semiconducting polymers, ultrahigh molecular weight polymers, biopolymers, the origin of life, complex macromolecular architecture and biomedical polymers.

CRISTOFOR I. SIMIONESCU (1920-2007)

In 1964, the Institute of Chemistry in Jassy was transformed into an Institute dedicated entirely to research, investigation and application of natural and synthetic fibers, i.e., the **“Petru Poni” Institute of Macromolecular Chemistry**. Prof. Cristofor I. Simionescu served as its Director for 30 years (from 1970 to 2000). It is now an Institute of Excellence of the Academy of Romania.

The studies carried out at the Institute included wood chemistry, reed from the Danube Delta, polysaccharides, synthesis and polymerization (copolymerization) of new monomers, polymer mechanochemistry, photopolymers, semiconducting polymers, chemistry of macromolecular charge transfer complexes, plasmochemistry, multifunctional initiators, polyacetylenes and other polymers with conjugated double bonds and electroinitiated polymerizations.

Prof. Cristofor I. Simionescu was also interested in the origin of life, particularly under the conditions of the reduced atmosphere of primary gases on cold Earth. He published over fifty (50) scientific articles on the subject and also coauthored a book entitled **“Cold Theory of the Origin of Life”**, published in Romanian and Russian.

He has supervised more than one hundred (100) doctoral dissertation of researchers from many parts of the world and some of his former students occupy important positions at universities and research centers in many countries including, Romania, United States, Germany, Canada, Republic of Moldavia, Russia, Bulgaria, Egypt, Pakistan and Algeria.

Prof. Cristofor I. Simionescu is the holder of more than fifty (50) patents, has published more than eight hundred (800) scientific articles and is the author or coauthor of more than twenty seven (27) books written mostly in Romanian, English and Russian. Some of them are the following:

Chemistry of Wood in the People's Republic of Romania (1964)

Chemistry of Reed (1967)

Mechanochemistry of Macromolecular Compounds (1967)

Present Status of the Study of Grafting of Cellulose (1967)

Fractionation of Macromolecular Compounds (1969)

Chemistry of Wood and Cellulose (2 volumes, 1972-1973)

Chemistry of Wood in Romania. Poplar and Willow . (1973)

Treatise of Chemistry of Macromolecular Compounds (4 volumes)
(1973-1993)

Chemistry of Marine Algae (1974)

Biocompatible and Biologically Active Polymers (1980)

Enzymes (1980)

Proteins (1982)

The Origin of Life (1983)

Macromolecular Chemistry (1985)

Polyacetylenes (1987)

Bioenergetic Implications of Dyes (1988)

Aspects of History of Chemistry in Romania (1964)

Relationship between Science and Philosophy

Thoughts (Gânduri , 5 volumes- Essays and Reflections on
Life and Society written during the latter years of his life)

Prof. Acad. Cristofor Simionescu was member of many professional and honorary societies including the American Chemical Society, Société Chimique de France, Société de Chimie Industrielle de Paris, International Society for the Study of the Origin of Life (ISSOL) and others.

He served as Romanian National Representative at the International Union of Pure and Applied Chemistry (IUPAC) and was a member of the Macromolecular Division and the IUPAC Commission for the Teaching of Chemistry.

Prof. Acad. Cristofor I. Simionescu was a member, Vice-President and President of the Academy of Romania, member of the International Academy of Wood Science (IAWS), Academy of Sciences of the German Democratic Republic, Hungarian Academy of Science, Academy of Sciences of the Republic of Moldavia, European Academy of Sciences and Arts, New York Academy of Science and others.

He was *Doctor Honoris Causa* of the Polytechnic Institute of Sofia, Bulgaria, was awarded the Gold Medal by the American Chemical Society and 1976 and the National Order "*Star of Romania*" as Grand Officer in 2000.

Prof. Cristofor I. Simionescu was the Editor of several international scientific journals including *Cellulose Chemistry and Technology*, *Memoirs of the Scientific Sections of the Academy of Romania* and *Fuzzy Systems*.

He also served a member of the Editorial Board of many international journal including *Revue Roumaine de Chimie*, *Acta Polymerica*, *Journal of Polymer Science*, *European Polymer Journal*, *Journal of Polymer Science- Polymer Chemistry Edition*, *Polymer Bulletin*, *Polymers for Advanced Technologies* and the *Southern Brazilian Journal of Chemistry*.

During the early years of publication of the *Southern Brazilian Journal of Chemistry* we had many collaborators from Iasi including Corneliu Oniscu, Adina Dumitrascu, Dan Cascaval, Eugen Horoba, Tinca Onofrei, Cecilia Arsene, Carmen Mita, Radu Tudose, T. Gavriloaiei, Raluca Mocanu, Maria Calistru, R. Olariu and Mircea Constantinescu.

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E D I T O R I A L

Romania is well known to have played a major part in the development of fuzzy sets, logic and systems theory. Let us remember here the names of Grigore Moisil, D. Ralescu, C.V. Negoita, D. Butnariu, V. Dumitru.

Following this tradition, both theoretical and applicative consistent researches are currently developed in this country. Although the Romanian school in fuzzy systems is now oriented rather to engineering aspects, the fundamental research is emphasized too.

Today, the main center of research is in Iasi. It is due to the scientific, didactic, and organizational efforts of the Managing Editor of this journal. Now, powerful groups involved in fuzzy systems research exists in the Polytechnic Institute of Iasi, in the University of Iasi and in the Institute for Information Science, Romanian Academy, Iasi Branch. The international symposia organized in Iasi these last three years reflect the high level of research in Romania. I am convinced that these research forces can push the field in this country.

This new journal is aimed to contribute to the dissemination of information in fuzzy systems and in related fields. In the first place, it will reflect the connections fuzzy systems theory has with other recently developed sciences: artificial intelligence, neural networks, chaotic systems. Applications of fuzzy systems in engineering, economics, information science, computer science, medicine a.s.o. will be also emphasized, according to the strategy of the Editors.

I hope the journal will also reflect the state of the art in research in this country, and that the best papers presented in the symposia organized here will find a suitable publication medium.

The distinguished International Editorial Board offers the guarantee of a top level international journal that will contribute, starting its very first year, to support the impetus of the scientific and technical research in the field of fuzzy systems. I am sure that all the members of the Editorial Board and the referees will help to keep up the scientific level of this journal.

I hope this journal will contribute to the East - West cooperation, as well as to the scientific cooperation at an international scale.

Finally, I hope that this journal will attain his objectives very soon, and it will be soon recognized as a forum for the leading edge researches in fuzzy systems and related fields.

Cristofor Simionescu
President, Iasi Branch of the Romanian Academy

L.G. Ionescu

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CRISTOFOR I. SIMIONESCU
PROFESSOR OF ORGANIC
AND MACROMOLECULAR CHEMISTRY
FULL MEMBER OF THE
Academy OF ROMANIA

Jassy, 11 Palade Street
Tel. 15374

August 1990

Prof.Dr. Lavinel G. Ionescu
Secretary, Rio Grande do Sul Section
Brazilian Chemical Society

Dear Professor Ionescu,

Thank you very much for your letter of June 8, which was a real pleasure to me; first of all, as it comes from a Romanian having a high academic position and living far away from his country, and then for the kind invitation of joining the Editorial Board of the SOUTHERN BRASILIAN JOURNAL OF CHEMISTRY. I am happy to accept this job and I assure you that I'll urge my colleagues and coworkers to send you their contributions.

Having in view a possible future scientific cooperation between our countries, I take the opportunity of informing you that in Jassy there exist an institute of macromolecular chemistry - The "Petru Poni" Institute - and a Chemistry Department (within the Polytechnic Institute) which I am leading. Also, I am the President of the Jassy Branch of the Romanian Academy to which - after the Romanian revolution from December - its former institutes of research (9 in Jassy) have been returned. Thus, under the new conditions created, I invite you to visit us - possibly, in a future trip of yours to Europe - as we are now free to establish scientific contacts with specialists all over the world; I am confident that stimulating cooperation relations could be established between our institutions. I also suggest you a regular exchange between your publications and one of the journals we are issuing here in Jassy: CELLULOSE CHEMISTRY AND TECHNOLOGY or MEMOIRS OF THE SCIENTIFIC SECTIONS OF THE ROMANIAN ACADEMY. Under separate cover, I'll send you copies of these journals.

Looking forward to receiving soon news from you, I send you my considerate regards and remain,

Yours sincerely,

Cristofor I. Simionescu
Acad. Cristofor I. Simionescu

SOUTHERN BRAZILIAN JOURNAL OF CHEMISTRY

LAVINEL G. IONESCU, B.S., M.S., Ph.D., EDITOR

CAIXA POSTAL 15032, AGRONOMIA
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Porto Alegre, 26 Iulie 1993

Ilmo. Sr.
Acad. Prof. Dr. Cristofor I. Simionescu
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Mult Stimate D-le Academician Simionescu,

A trecut mai bine de un an de zile de când am facut vizita la Iasi. Din pacate, la întoarcerea mea aici am avut mai multe neplaceri si necazuri.

Din cauza iresponsabilitatii unor colegi de la Universidade Federal do Rio Grande do Sul, în urma unor accidente de laborator care au emanat gaze de compusi organici clorati si fosforati, am suferit de consecinte serioase la sistemul nervos si respirator. Acum ma simt mai bine. Am ramas însa in urma cu o sumedenie de treburi.

La noi aici acum situatia este foarte asemanatoare cu cea din Europa de Rasarit. Aproape tot ce tine de guvern se darâma. Multe din Universitatile Federale au ajuns într'un hal de necrezut. Coruptia, furtul de bunuri publice si iresponsabilitatea domnesc peste tot. Dupa înlaturarea Presedintelui Collor lucrurile s'au înrautatat si mai mult. Am fost nevoit sa încep sa dau conferinte la doua universitati particulare (Pontificia Universidade Católica do Rio Grande do Sul si Universidade Luterana do Brasil) ca sa pot sa supravietuiesc.

In sfârșit am reusit sa scot primul numar din *Southern Brazilian Journal of Chemistry*. Separat va trimit prin posta, pentru Biblioteca Academiei, numere din *Químico Pampeano*, buletin pentru chimistii din Sudul Braziliei, *Anais do 2º Simposio de História e Filosofia da Ciência* si niste monografii.

Îmi cer scuze pentru greselile de limba română, inasa am preferat sa scriu pe românește. Cua ocazia vizitei in România anul trecut, unii de la Bucuresti imi ziceau ca vorbesc ca Moldovenii de peste Prut.

Va multumesc pentru cordialitatea si amabilitatea pe care mi-ati acordat-o cu ocazia vizitei mele la Iasi.

Cu cele mai alese sentimente,

Prof. Dr. Lavinel G. Ionescu

Prof. Acad, Cristofor I. Simionescu was a great scientist, person and human being.¹⁻⁷ He never forgot his origins, always helped others and was true citizen of Jassy, Moldavia and Romania.

In retrospect, it is easy to understand why Prof. Acad. Cristofor I. Simionescu was much closer to and a friend of Ilie G. Murgulescu, prominent physical chemist and educator and collaborated and helped him while he was Minister of Education of Romania. It is also easy to understand why he was more distant from Costin D. Nenitzescu, Romania's well known physical organic chemist.⁸⁻⁹

Like many great scientists, Prof. Acad. Cristofor I. Simionescu was a modest person, never lost contact with his roots, was a scholar aware of his social responsibility and a patriot.⁸⁻¹⁵

He genuinely believed that school, education and moral values were the key factors in the development of society.

Whether or not he served as Doctoral Thesis Advisor for Elena Ceausescu is not very important and irrelevant at this time, twenty years after her execution. What really matters is that polymer science and macromolecular chemistry developed and reached high standards in Romania.

As Dr. Aubrey D. Jenkins, Emeritus Professor of Polymer Chemistry at the University of Sussex, United Kingdom remarked to us during a visit in Porto Alegre in the 1980's, there were very few international conferences on polymer science that he attended where a President of a Country and his wife were present at the inaugural ceremony, two orchestras played and the scientific level was high.¹⁶

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At the time, Prof. A. D. Jenkins was visiting Brazil and other countries in Latin America on behalf of the British Council to evaluate possible areas of collaboration and cooperation in polymer science.¹⁶

Prof. Acad. Cristofor I. Simionescu was the main driving force behind the organization of numerous national and international conferences on wood, cellulose and macromolecular chemistry, mainly in Jassy and Bucharest. We cite particularly the International Symposium on Macromolecules (IUPAC Macro 83, Bucharest).

Prof. Acad. Cristofor Simionescu was a very educated and erudite person. Some twenty years ago, when most people were talking about a new era, new paradigms, globalization, other truths and a change of values, Prof. Acad. Cristofor I Simionescu in Jassy and other brilliant minds in Coimbra, Portugal were talking about a crisis of civilization, return to mercantilism and the darkness of the middle ages, imbecilization of the masses and even the imbecilization of the elites (socially superior ruling classes).¹⁶

Prof. Acad. Cristofor I. Simionescu has left us and gone to other levels and dimensions. His example, his lessons and his legacy remain for those who may desire to make use of them.

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