

**Editorial****Waldemar Saffioti, The Centennial Birth of a Distinguished Professor (1922-2022)**

April 16th, 1999 marks the day the eminent chemistry professor Waldemar Saffioti passed away in Araraquara at age 77. Among Saffioti's numerous life accomplishments, there are three, in particular, that summarize his visionary and entrepreneurial spirit. Firstly, he gave birth to the first Chemistry Course in Sao Paulo's countryside, located in Araraquara city, which became the embryo of the current Araraquara Chemistry Institute – UNESP (IQAr). Secondly, in 1976, Saffioti started the Eclética Química Journal still published nowadays by the IQAr, which has adopted the peer review system since its origin. Lastly, the renowned professor wrote some of the chemistry books that helped set the standard for chemistry education and were widely adopted for a long time throughout Brazil.

Born on January 2nd, 1922, in Bragança Paulista (SP), Saffioti became Bachelor in Chemistry from the University of São Paulo (USP), in 1942. As a chemist, he worked at R.F. Matarazzo and F. Endoquímica S.A. industries for 6 months and as a technical assistant at the Rubber Laboratory of the Instituto Agrônômico do Norte (Ministry of Agriculture) in Belém (PA), Brazil, in association with North American scientists from April 1944 – December 1945.

From January 1946 to October 1948, Saffioti performed his doctoral degree at USP supervised by Prof. Heinrich Reimboldt. On November 13th, 1948, he presented his thesis “On sulfoxide and sulenoxide addition compounds with Aryl-Carbinol”. During the same period, he taught chemistry at Colégio Estadual de Mogi das Cruzes (a high school from 7/1946 to 3/1949). From April 1949 to April 1956, he taught Chemistry and Physics at the Public Force Officers' Course in Sao Paulo State. In 1950, he was appointed effective Chemistry Teacher at Instituto de Educação Caetano de Campos (a high school in SP). On this occasion, Saffioti built a reputation in chemistry education when, in collaboration with Prof. Geraldo Camargo de Carvalho, he wrote a collection of three books to suit the three years of Chemistry High School education. Shortly after being released, Saffioti and Camargo's Chemistry Collection became a bestseller in Brazil being extensively adopted for nearly 20 years.

Saffioti became a Bachelor in Physics, in 1955, with a particular interest in Nuclear Energy. From April to July 1956, he worked as an Associate Researcher at Rio de Janeiro's Radiochemistry Laboratory of the Brazilian Center for Physical Research. In August 1956, he received a scholarship from the National Research Council (CNPq) to sponsor his training in Nuclear Energy at Pennsylvania State University and at Argonne National Laboratory. Between July 1957 and May 1958, he helped install the nuclear reactor from the Atomic Energy Institute of SP. In 1958, he was appointed Assistant Professor at the Department of Mineralogy and Petrography (USP), taught Physics and Chemistry of Minerals, and gave several lectures for research centers and universities in the fields of chemistry, nuclear energy, reactors, minerals, and Brazilian rubber. Those experiences led him to write a book on Principles of Nuclear Energy, edited four times between 1978-1982.

In 1962, Saffioti was already residing in Araraquara and dedicating great energy to overcoming the challenges involved in the foundation of the first Chemistry Course in SP's countryside. Such challenges involved the construction and installation of laboratories, finding qualified technical-administrative staff, financing and purchasing specialized equipment and chemicals, elaborating the course's curriculum, installing a fully equipped library, and subscribing to scientific journals. In addition to that, due to the lack of qualified professors in the region, Saffioti taught most of the classes until the newly formed chemistry course started to bear fruits. During start-up period, he was also elected several times Head of the Chemistry Department at the current Faculdade de Filosofia, Ciências e Letras de Araraquara (FFCLA).

In 1967, Saffioti presented his Lecturer Thesis entitled “On Some Asymmetric Intermolecular Complexes Created by Protonic Bonding” dealing mostly with hydrogen bonding. He supervised 61 Scientific Initiation projects and six PhDs, besides carrying out more than 100 scientific research. In 1968, he published a schoolbook on Chemistry Principles edited by Companhia Editora Nacional. In 1970, he did an internship at the CNRS Physical

Chemistry Laboratory in Vitry-Thiais, France, studying hydrogen-bonded binary complexes involving triphenylcarbinol and diphenylsulfoxide, diphenylselenoxide and triphenylarsinoxide using Raman and Infrared spectroscopies. Saffioti retired from academic life, in 1978, but remained politically active and was elected Director of the Unesp Chemistry Institute (IQAr) for the period from November 1984 to November 1988. He also became involved in local and national politics.

Saffioti's life accomplishments and utmost dedication to the student body were registered in significant tributes. When the Department of Chemistry (FFCLA) was transformed into the Araraquara's Chemistry Institute (1977), the IQAr's student association was permanently baptized as "DAWS" (Academic Directory Waldemar Saffioti), and the Regional Araraquara/São Carlos/Ribeirão Preto of the Brazilian Chemical Society bears the name "Regional Interior Paulista Waldemar Saffioti".

### Contributions to this issue

A recent mini-review summarizes the latest developments on water-in-salt electrolytes produced with low-cost salts and with perspectives on their application in electrochemical energy storage. They represent an emerging field in batteries and supercapacitors that may overcome the safety concerns about the potential flammability of typical organic electrolytes. Following is described the layered hexaniobate of  $K_4Nb_6O_{17}$  composition and its derivatives comprise nanostructured materials with suitable properties for application in catalysis, electrochemistry, and energy. This work focuses on the proton exchange efficiency of the  $K_4Nb_6O_{17}$  and the phase resulting from the exchange of  $K^+$  by  $H^+$  ion. Another article describes the use of somatic embryos of *Ocotea catharinensis* as a model to investigate the biosynthetic pathway of tetrahydrobenzofuran neolignan formation utilizing feeding  $^{13}C$ -labelled precursors. It was shown that using the protein fraction from the embryogenic cultures, the substrate coniferyl acetate was converted into isoeugenol, a putative precursor of neolignan formation. Afterward, the phenylpropanoids involved in the lignification process and the formation of numerous secondary compounds in plants with a variety of biological activities are described. The enzyme phenylalanine ammonia-lyase extracted from *Piper* and *Peperomia* species mediates the key entry point to the general phenylpropanoid pathway. In *Peperomia* species, the phenylpropanoid biosynthetic pathway seems to produce mainly tetrahydrofuran lignans of biological interest. In the sequence, the characterization of prepreg produced with two different commercial epoxy resins is described and the prepreg is used to investigate and optimize the curing cycle of structural components used in the aerospace industry. Completes this issue the research about the synthesis of powder and thin films of  $Pb_{0.30}Ca_{0.10}Sr_{0.60}TiO_3$  and  $Pb_{0.30}Ca_{0.60}Sr_{0.10}TiO_3$  ternary systems by the polymeric precursor method and the deposition of thin films on the Si/SiO<sub>2</sub>/Ti/Pt substrate. The effects of  $Sr^{2+}$  and  $Ca^{2+}$  substitutions on the electrical and structural properties of the BaTiO<sub>3</sub> were theoretical and experimentally investigated.

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**Assis Vicente Benedetti**

**Editor-in-Chief**

**Eclet. Quim. J.**

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<sup>1</sup> The Eclética Química Journal thanks Química Nova for the permission of using the article "IN MEMORIAN", *Quim. Nova.* **1999**, 22 (4), 630-631, by A. C. Massabni, C. B. Melios and D. W. Franco.