

## ***In Memoriam* of Professor José Simões Redinha**

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Professor José Simões Redinha left us physically on September 3<sup>rd</sup>, 2025, at the age of 98, almost a centenarian, being survived by two daughters and their descendants. He was born in Campizes (Condeixa-a-Nova, Coimbra) on October 19<sup>th</sup>, 1927, studied at the University of Coimbra (UCoimbra), got his PhD in Physical Chemistry (1958) at the Imperial College of Science and Technology, University of London, and, on the following year, at the UCoimbra (there was no PhD equivalence at that time) where he became Full Professor in 1965 (Fig. 1).



**Figure 1:** Professor José Simões Redinha in academic dress, with gown and cap (“capelo”) of the University of Coimbra.

He was appointed for many *positions of high responsibility*, such as Director of the Faculty of Sciences of the UCoimbra (1972-74), in a period of university reform, member of relevant commissions, *e.g.*, the National Commission for the reform of the

courses of that Faculty, which led to the creation of the courses of Engineering and the conversion of that Faculty into the Faculty of Sciences and Technology, thus strengthening the technological orientation with industrial significance.

Other commissions include that for restructuring the National Institute of Scientific Research (Instituto Nacional de Investigação Científica, INIC) (1982), and the advisory committee (Comissão Consultora) for Chemistry (1982-85). INIC was then the governmental entity responsible for coordinating and implementing the national science policy, particularly through the coordination of university scientific research in Portugal. Thus, it corresponds to the current Foundation for Science and Technology (Fundação para a Ciência e a Tecnologia, FCT) which itself is undergoing (2025) the process of extinction and integration in the new Agency for Research and Innovation (Agência para a Investigação e Inovação), as a result of a reorganization of the Ministry of Education, Science and Innovation.

Prof. Simões Redinha also accepted to be the national representative at EURACHEM (1990-96) (internacional organization for validation of methods in Chemistry) and at the Scientific and Technical Committee of EURATOM (European Atomic Energy Community) (1990-93).

He fostered actively the interaction of the University with the outside through relevant **outreach activities**. Accordingly, he accepted the positions of President of the Installation Commission of the Centre of Ceramic and Glass (Comissão Instaladora do Centro de Cerâmica e do Vidro) (1983) and President of the Association for Technological Innovation and Quality (Associação para a Inovação Tecnológica e Qualidade, AEMITEQ) (1992-2001) which has assisted the industrial sector with technological support.

His outreach activity is also illustrated by the analytical services (*e.g.*, in the quantification of oligo-elements in food) of the Chemistry Laboratories he established (1963-66) at the “Estudos Gerais Universitários de Moçambique” (later becoming the University of Lourenço Marques), where he was appointed as Professor Extraordinário on a service commission. The quality of such laboratories was recognized by a delegation of university professors of South Africa which declared (1966), in a press interview, that they were the best of the African continent.

Prof. Simões Redinha’s **academic** teaching, although mainly developed at the University of Coimbra, was also undertaken at the Instituto de Climatologia e Hidrologia attached to this University (1960-2012) and at the University of Lourenço Marques (see above). They concerned mainly areas of physical chemistry (*e.g.*, thermodynamics), analytical chemistry, chemistry of solutions and of interfaces.

He was also devoted to the **history and philosophy of science**, namely addressed to chemistry, thermodynamics and electrochemistry, as well as to scientific institutions (*e.g.*, UCoimbra, its Chemistry Laboratory, and many others as indicated below) and personalities (Andrade de Gouveia, Couceiro da Costa, Sousa Gomes).

He delivered the “Oração de Sapiência” (sapience lecture) at the “Sala dos Capelos” (“Capelos” hall) of the UCoimbra, in the opening ceremony of the academic year of 1990-91.

Prof. Simões Redinha’s **research activities** were diversified, in areas of thermodynamics of solutions and interface phenomena, including the structure of solutions of non-electrolyte compounds (followed by the electrolyte solutions within the field of electrochemistry), of solid state chemistry and of analytical chemistry. He applied calorimetric, thermomicroscopic, spectrophotometric, electrochemistry and theoretical methods.

He founded and coordinated the research line on Thermodynamics of Solutions and Interface Phenomena. His studies were also extended to the structure of organic compounds with pharmacological interest.

Along his career he (co-)authored a high number of scientific publications in those areas, and it is noteworthy to mention that he continued his research for a long *period after his retirement* (“jubilação” when he was 70 years old). In fact, in the couple of decades following his “jubilação” (1997-2016) he published 50 articles in international journals, the last one (within those registered at the Web of Science) when he was already 89 years old.

Moreover, as a *nonagenarian*, he published the following **books in fields of the history of science**:

- “A Química: o Primeiro Século na Universidade de Coimbra e o Progresso Desta Ciência” (Chemistry: the First Century of the University of Coimbra and the Progress of This Science) (Imprensa da Universidade de Coimbra, 2020, 235 pp), when he was 93 years old (Fig. 2);



**Figure 2:** “A Química: o Primeiro Século na Universidade de Coimbra e o Progresso Desta Ciência”, by J. Simões Redinha (Imp. Univ. Coimbra, 2020).

- “O Associativismo em Ciência e a Sua Expressão na Química” (The Associativism in Science and Its Expression in Chemistry) (Imprensa da Universidade de Coimbra, 2024, 202 pp) (Fig. 3, left) on the role of scientific institutions and academies to the development of science, when he was 97 years old.



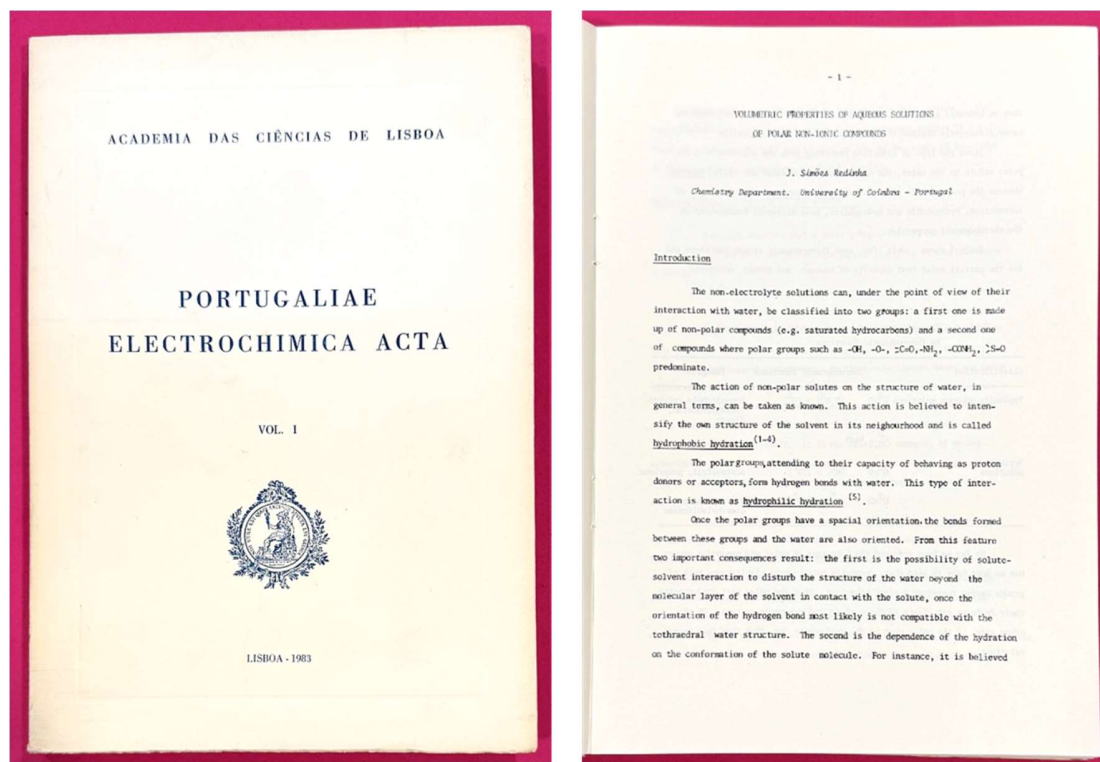
**Figure 3:** “O Associativismo em Ciência e a Sua Expressão na Química” by J. S. Redinha (Imp. Univ. Coimbra, 2024, left), and its launch session with Prof. Victor Lobo (right).

The latter book was presented by Prof. Victor Lobo and by Prof. Décio R. Martins in the launch session held on December 10<sup>th</sup>, 2024, at Rómulo – Centro Ciência da Universidade de Coimbra (Fig. 3, right), in which Prof. Simões Redinha himself also delivered some words and talked to the attendees.

Concerning the *Portuguese Electrochemical Society* (Sociedade Portuguesa de Electroquímica), Prof. Simões Redinha supported the creation of this Society since the beginning. He was a member of the foundation commission composed of representatives of the Portuguese Universities where Electrochemistry was considerably studied, *i.e.*, apart from the UCoimbra, also the University of Porto (Prof. João de Oliveira Cabral), the University of Lisbon (Prof. César Viana), the University of Minho (Prof. João Simão) and the Technical University of Lisbon (myself). Accordingly, he was a co-founder (1983) of this Society, its first President and its representative (1991-95) at the “Working Party of Analytical Chemistry” of the Federation of the European Chemical Societies (FECS).

He contributed to the journal of this Society, *Portugaliae Electrochimica Acta*, with relevant articles, *e.g.*, (i) in the 1<sup>st</sup> volume of this journal (“Volumetric Properties of

Aqueous Solutions of Polar Non-ionic Compounds”, 1983, vol. 1, pp. 1-17) (Fig. 4), and (ii) in the celebratory volume (1989, vol. 7) of the 5<sup>th</sup> anniversary of the Society (“An outline of the historical development of electrochemistry”, pp. 195-220; and “The growth of electrochemistry in the University of Coimbra from the beginning to the present”, pp. 221-228) (Fig. 5).



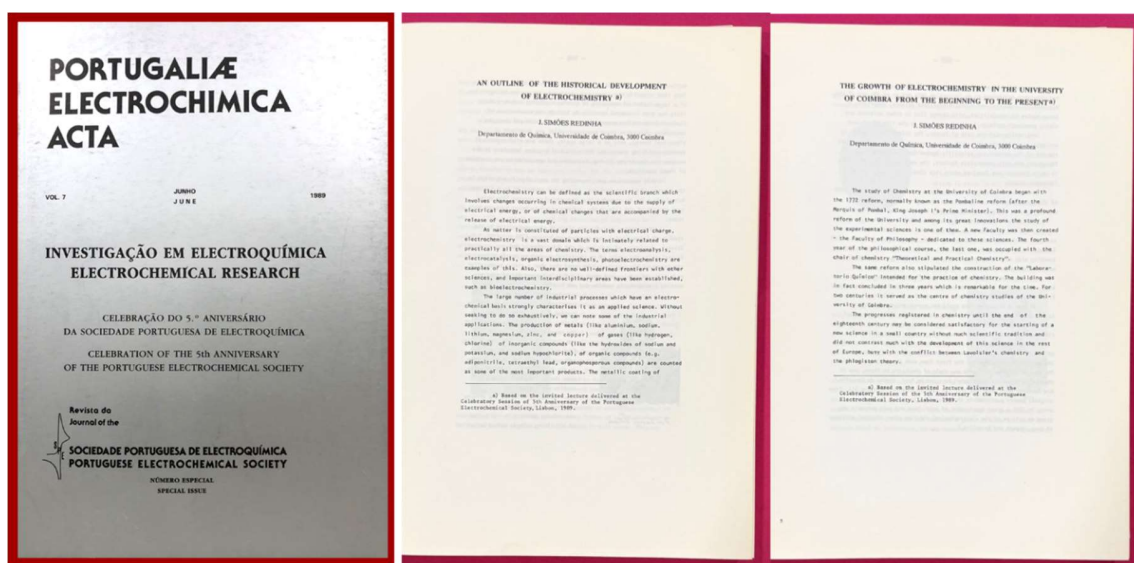
**Figure 4:** Article (front page, *right*) in the inaugural volume of *Portugaliae Electrochimica Acta* (*left*), by J. Simões Redinha.

Prof. Simões Redinha played a key role in the acceptance by the Chemistry Department of the UCoimbra to host in its Library (2013) the library collection of the Society when the latter had to leave its room/office located in the library of the Complexo Interdisciplinar of the Instituto Superior Técnico in Lisbon. In this way, the Society library collection is being adequately preserved at the UCoimbra and remains accessible to the scientific community.

Prof. Simões Redinha also published, in co-authorship, various other articles in this journal, as well as in the journal of the Portuguese Chemical Society and in the *Memórias da Academia das Ciências de Lisboa* (Memories of the Academy of Sciences of Lisbon) and other publications of this Academy.

He was a dedicated member of this Academy, Corresponding (1979), followed by Effective (2006) and finally (2023) Emeritus, having contributed to various initiatives.





**Figure 5:** Articles (front pages, *right*) in the Portuguese Electrochemical Society 5<sup>th</sup> anniversary celebratory volume (*left*) of *Portugaliae Electrochimica Acta*, by J. Simões Redinha.

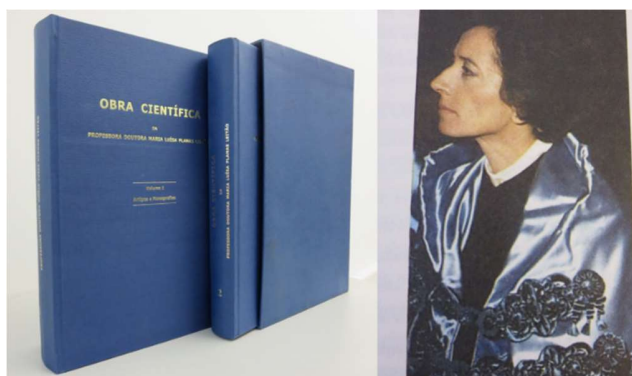
He was awarded *other distinctions*, such as the *Prize of the Portuguese Electrochemical Society* (2012, the inaugural year of this prize within the 30<sup>th</sup> anniversary celebrations of this Society) (Fig. 6), the Gold Medal of the City of Coimbra (enterprise merit) by the Town Hall, and various academic homages including the special edition of the *J. Chem. Thermod.* (2007, Vol. 39, No. 10) in his honor.



**Figure 6:** Awarding of the Prize of the Portuguese Electrochemical Society to Prof. J. Simões Redinha (*left*) by the President of the Society (Prof. Armando Pombeiro) (*right*) at the 18<sup>th</sup> Meeting of this Society held in Porto, 2013.

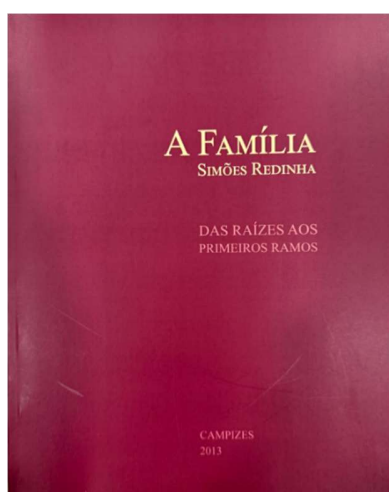
An important feature of Prof. Redinha's *personality* concerns not only his respect to and recognition of his friends (“amigo do seu amigo”) including scientific collaborators, but also his dedication to his own Family.

Within the former perspective, he collected, in two volumes (Imprensa de Coimbra, 2005), the scientific publications of one of his main collaborators, Dr. Maria Luísa Planas Leitão, who passed away prematurely (Fig. 7), as a very rare example of appreciation and modesty of a mentor for his disciples.



**Figure 7:** Collection (by Prof. Simões Redinha) of the scientific works (Obras Científicas) of his disciple Dr. Maria Luísa Leitão (Imprensa de Coimbra, 2005).

Moreover, his love and dedication to his Family led him to publish the book entitled “*A Família Simões Redinha - das Raízes aos Primeiros Ramos*” (The Simões Redinha Family – from the Routes to the First Branches), 2013, edited by the author (Fig. 8), concerning also his native land Campizes. The book was in memory of his Parents.



**Figure 8:** “A Família Simões Redinha - das Raízes aos Primeiros Ramos”, 2013, author edition.

Professor José Simões Redinha will remain forever in our memory as a highly recognized man of science and culture who greatly contributed to their development in our country and also to the foundation and life of our Portuguese Electrochemical Society, as a personality with an exemplary human dimension, and... as a Friend.

### **Reference**

“Saudação ao Recipiendário” (Recipient Laudation to) José Simões Redinha as Academy Full Member, by Armando J.L. Pombeiro, December 4<sup>th</sup>, 2014 (Presentation at the Academy of Sciences of Lisboa, in Portuguese). <http://dx.doi.org/10.58164/h0ht-xe94>