

Women in Science and Names of Elements. Chemistry Teaching Resources for Learning about Marie Curie and Lise Meitner

M. Araceli Calvo Pascual^{1,2}

¹Univ Autónoma de Madrid, Fac Formación de Profesorado y Educación, Dept Didácticas Específicas, C/ Fco. Tomás y Valiente, 3, Ciudad Universitaria de Cantoblanco, Madrid 28049, Spain

²Real Sociedad Española de Química, Grupo Especializado de Didáctica e Historia de la Física y la Química de las RR.SS.EE. de Física y de Química, Fac CC Químicas, Univ Complutense de Madrid, Avda Complutense s/n, Madrid 28040, Spain

Topic: The Periodic Table and chemical education, past, present and future

Abstract:

This paper seeks to contribute to the development of a teaching framework for secondary chemical education that demonstrate the presence of women in the history of science. For this purpose, a range of types teaching resources is shown, specifically focused on two scientists: Marie Curie and Lise Meitner, the two women scientists that have elements named for them.

Firstly, a text based on the use of drama as a teaching resource in the secondary school is proposed. ¹In addition, photographs, ²documentaries, ³oral history interviews, ⁴news, ⁵articles, ^{6,7}magazines, ⁸and books ^{9,10} are suggested.

The objectives are that secondary school teachers increase their knowledge about different resources and reflect on how to use them to design innovative activities that promote active learning about the contribution of women to the science.

References

1. M. A. Calvo Pascual. *An. Quím.* **2011**, 107, 4, 390-397.
2. R. L. Wolke. *J. Chem. Ed.* **1988**, 65, 7, 561-673.
3. Marie Curie– Documentary. NobelPrize.org. Nobel Media AB 2018. Sat. 24 Nov 2018. <https://www.nobelprize.org/prizes/physics/1903/marie-curie/documentary/>
4. Interview of Hélène Langevin-Joliot by Azam Niroomand-Rad on 2003 April 13, Niels Bohr Library & Archives, American Institute of Physics, College Park, MD USA, www.aip.org/history-programs/niels-bohr-library/oral-histories/31377
5. S. Borman. *C&EN.* **2017**, 95, 36, 22-25.
6. H. F. Walton. *J. Chem. Ed.* **1992**, 69, 1, 10-15.
7. R. L. Sime. *J. Chem. Ed.* **1989**, 66, 5, 373-376.
8. F. Meyers. *Chem. Int.* **2011**, 33, 1, 1-52.
9. M. Álvarez, T. Nuño, N. Solsona, *Las científicas y su historia en el aula.* Síntesis, Madrid, **2003**.
10. J. Apotheker, L. S. Sarkadi, *European Women in Chemistry*, Wiley-VCH, Weinheim, **2011**.