

Type of presentation: Poster

IT-5-P-5719 Major update of the EELS database: eelsdb.eu

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Since its creation at the end of the 1990's, the EELS database has gathered more than 200 spectra covering 35 elements of the periodic table, becoming the largest open-access electronic repository of spectra from Electron Energy-Loss Spectroscopy and X-ray Absorption Spectroscopy experiments.¹ The EELS database is now a common tool used by spectroscopists, theoreticians, students and private firms as a reference catalog for fine structures and data-treatment analyzes²⁻⁴ and has been referenced by more than 30 papers.

Much of this success is due to the open-access nature of the database. The database depends on voluntary user contributions; to encourage these contributions, we have performed a major update of the website which is now accessible at <http://eelsdb.eu/>. The design of the website has been improved (Figure 1) and several new functions have been implemented, including a plotting function (Figure 2) which allows the online comparison of spectra before downloading. The new design gives greater emphasis on the original work of the contributors by strongly highlighting their papers. In addition of the database itself, users can post and manage job adverts and read the latest news and events regarding the EELS community. All these improvements will be discussed further in the poster details.

1. T. Sikora and V. Serin, EMC 2008 14th European Microscopy Congress, pp-439-440, Springer-Verlag Berlin (2008)
2. N. Bernier et al., Materials Characterization, **86**, pp-116-126 (2013)
3. L. Zhang et al., Physical Review B, **81**, 035102 (2010)
4. R. Núñez-González et al., Computational Materials Science, **49**, pp-15-20 (2010)

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The EELS Data Base is a compilation of valence and core-loss spectra from Electron Energy Loss Spectroscopy experiments and X-Ray spectra. With more than 200 spectra covering 35 elements of the periodic table, it is the largest open access EELS database.



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Fig. 1: Homepage of the EELS spectra database: <http://eelsdb.eu/>.

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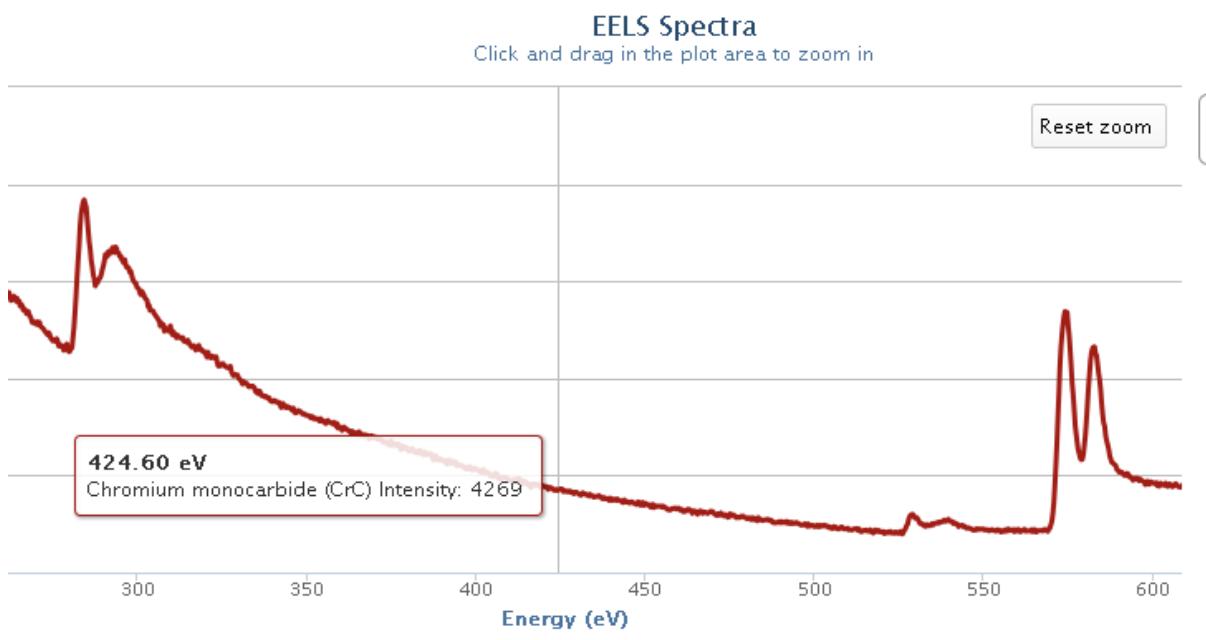


Fig. 2: The plotting page of the website allows the online comparison of spectra before downloading thanks to zoom-in and normalization functions.