

Press release

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The Carbon Element – the Good, the Bad and the Ugly

As the eyes and thoughts of the world focus on carbon at the COP26 Climate Summit in Glasgow, which started on 31st October 2021, the *European Chemical Society (EuChemS)* is releasing an updated version of its iconic Periodic Table, first produced for the *International Year of the Periodic Table* in 2019.

EuChemS President, Professor Floris Rutjes says:

With the release of the updated version of the EuChemS Periodic Table, the European Chemical Society aims to keep drawing attention to the scarcity of elements, which is a global problem that affects all of us. In particular the change in the colour of carbon shows the increasing challenges that we are facing with greenhouse gas production, which are far from being solved.

The main change to the EuChemS Periodic Table is to convert the colour of carbon from the benign green colour to a tricolour of green, red and dark grey.

Green because it is plentifully available in the form of carbon dioxide (too plentiful), carbonate rocks and vegetation.

Red because it will very shortly cause serious problems if we do nothing to restrict its use.

Grey because it can come from conflict resources.

The carbon cycle balances photosynthesis, by which plants grow taking up CO₂, with respiration (breathing), by which we and all flora and fauna live and give out CO₂. For millennia these two processes, compounded with CO₂ absorption and release by the oceans, have been in balance justifying the benign green colour given to carbon in the 2019 Periodic Table.

Burning carbon-based fuels (coal, oil, gas) pumps so much extra CO₂ into the air that photosynthesis and the oceans can't keep up so CO₂ levels rise leading to global warming and climate change that will cause severe disruption to all forms of life in the planet very soon if we do nothing.

Changing the colour of carbon is a clarion call to everyone, especially those responsible for the outcomes of COP26, to do all in their power to reduce their CO₂ emissions for the good of the next generations.

But why is it also grey, defined as "From conflict resources"?

Carbon, especially oil, can come from places where wars are fought over the oilfields or where oil revenues are used to fight wars.

As with all other conflict minerals, *EuChemS* calls on all oil refiners and users to avoid buying from oilfields tainted by conflict.

Professor Nicola Armaroli, Chair of the EuChemS Task Group on the Periodic Table and Executive Board member says:

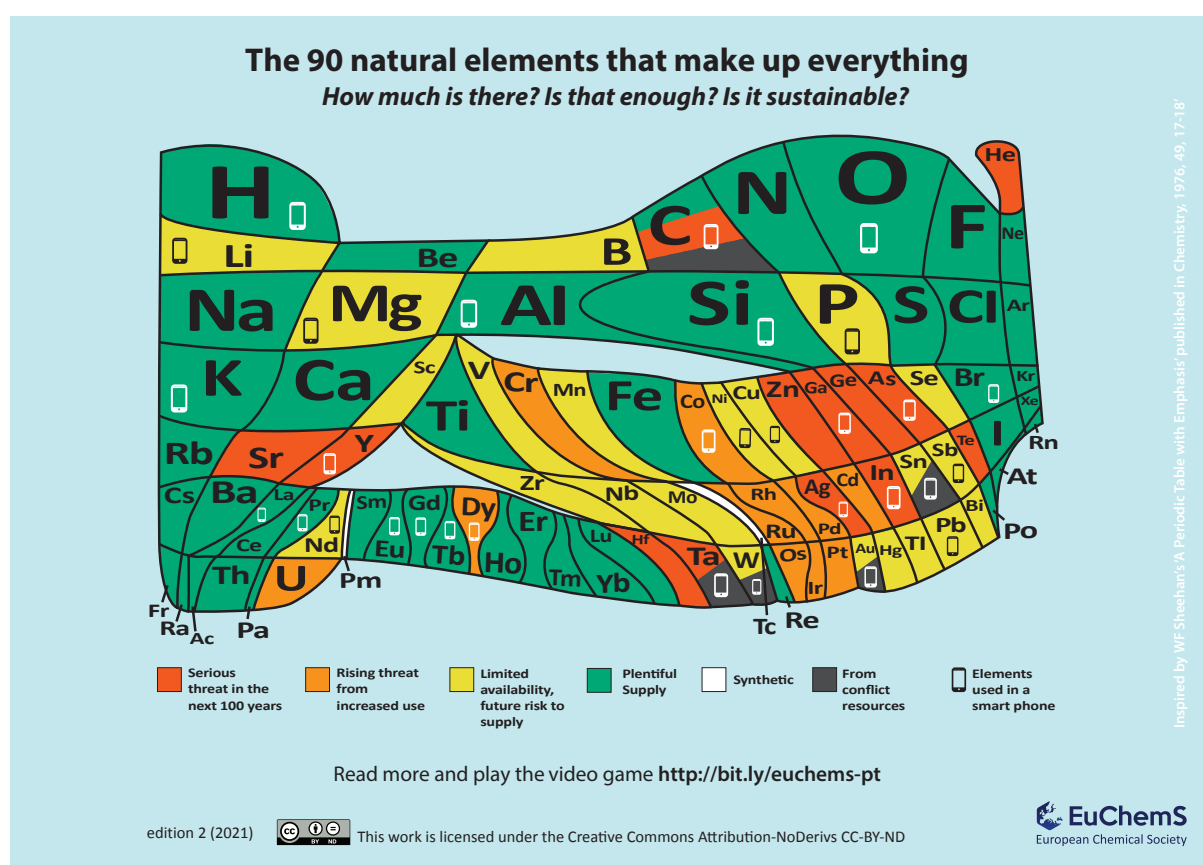
Plentiful carbon is the key chemical ingredient of life on Earth, but our energy-thirsty civilization has made it an intricate environmental and geopolitical problem. The updated version of the EuChemS Periodic Table depicts the complexity of a unique element that will define the way we live up to the sustainability challenge being addressed at COP 26 in Glasgow.

This updated version of the EuChemS Periodic Table graphically highlights the problems of carbon in our world now. If we behave responsibly by cutting our dependence on fossil fuels and never using it from conflict resources, we can save our beautiful and diverse planet and restore carbon to its rightful green colour.

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More information on the updated version of the EuChemS Periodic Table can be seen here:

<https://www.euchems.eu/euchems-periodic-table/>



ABOUT EUCHEMS AND CONTACTS

EuChemS, the European Chemical Society, is an umbrella organisation representing national Chemical Societies and other chemistry-related organisations in Europe. EuChemS aims to nurture a platform for scientific discussion and to provide a single, unbiased European voice on key policy issues in Chemistry and related fields. Through the promotion of Chemistry and by providing expert and scientific advice, EuChemS aims to take part in the solution to today's major societal challenges.

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