## Critical raw materials in waste electrical andricm0 -4.1 awwaon and opean

<sup>1</sup>, include indium, which is used in touchscreens and solar panels, and tantalum, which is used in microcapacitors for a range of application sofm mobile phones to wind turbines.

2019 is the International Year of the Periodic Table, and this has made us, at the Royal Society of Chemistry, think about the amazing applications, but also the supply risks of some of the elements. Several elements the are important in electrical and electronic equipment (EEE) such as mobile phones, tablets and smart TVs, have associated supply riskth same time waste electrical and electronic equipment (WEEE) is the fastest growing waste stream on the planets could be mitigated by reducing the use of CRMs, increasithe reuseof products or components that contain CRMs and increasing CRM recycling rate hemical scientists have a key role to plain this, by developing alternative materials, informing designers on the properties alternatives, and inding effective ways to extract CRMs mused devices However, they cannot face this challenge alone and concerted action is needed from government, manufacturers, retailers and consumers to reduce as and recycle CRMs

To decrease supply risks and enable the continued use of CRMs in EEE as well as in medical applications and sustainable energy solutions RSC recommends at more ambitious measures to improve the resource efficiency of CRMs and be set out in the implementation plans of Resources & Waste Strategies across the UK based on the following four principles:

## Critical raw materials

Critical raw materials (CRMs) are materials that are important to an economy and that are, or could become difficult to get hold of The list of CRMs that is most relevant to the UK currently its European Commission's 2017 list, which contains 27 materials that are 'criticalue to their high economic importance combined with high spply risk for the European econom CRM lists also cabe determined at national, regional and sectoral level (a lis(C)7.1e95a\* ar2s(C)7.1e95a\*719.11 57a6M4[(C)2 o\*onr.onr.5a\*

- a lack of adopted design principles for circularity that will enable costeffective upgrade, repair, remanufacturing and disassembly for rese and recycling of product componentand products;
- a lack of economic models and digital data solutions that connect collection facilities with re-use/recycling infrastructure and theoroducers that could use secondary components or materials;
- a lack of the ability to identify where the CRMs are present in components and products and the need forglobally harmonised reporting and labelling methods to facilitate this;
- a lack of critical of rastructure to 1/210 (1/217 (o) 7.3 Tf 0 Tc) (hm(w) 2 i)

## Contact

The Royal Society of Chemistry would be happy to discuss any of the issues raised in our statement in more detail. Any questions should be directed to policy@rsc\_org

About us