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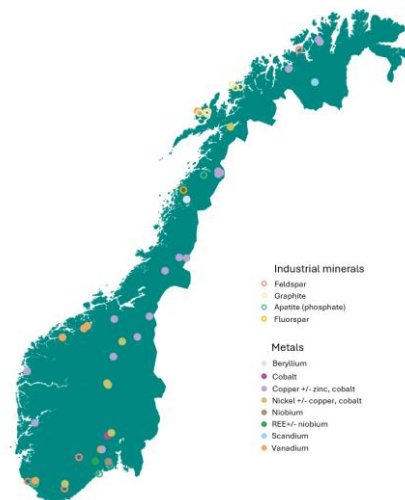
Abstract

## CRITICAL RAW MATERIALS (CRM) RECOVERY FROM NORWEGIAN DEPOSITS: CHALLENGES AND OPPORTUNITIES

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**ABSTRACT** – The secure supply of critical raw materials (CRM) and critical industrial minerals is essential for modern industries, including renewable energy, electronics, and high-tech manufacturing. Norway hosts a wide range of CRM deposits, such as antimony, beryllium, bismuth, cobalt, copper, indium, nickel, niobium, platinum group elements (PGE), rare earth elements (REE), scandium, tantalum, tungsten, vanadium, and zirconium, along with critical industrial minerals including barite, magnesium in olivine and dolomite, phosphate, silicon in quartz, graphite, and feldspar (Fig. 1). This presentation focuses on the ore characterization and mineral processing challenges associated with Norwegian CRM and industrial mineral deposits. It highlights the need for advanced mineralogical analysis techniques, tailored beneficiation strategies, and emerging processing technologies required to unlock the potential of these resources. By improving mineral liberation, optimizing separation methods, and integrating advanced processing solutions, Norwegian mineral resources can be better utilized to meet industrial demands.

**Keywords:** Critical Raw Materials, Industrial Minerals, Mineral Processing, Sensor-Based Sorting, Metallurgy.



**Figure 1** Significant deposits of critical metals and industrial minerals in Norway [1]

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