



Rare-earth elements are a set of metals that are widely used in the field of high-tech: smartphones, screens, windmills, electric cards, etc. They are mainly produced in China, on which the entire world is dependent for its supply. Scattered into the environment as a result of their mining, increasing use and almost non-existent recycling, rare-earth metals are feared. With good reason as, at high doses, they disrupt the development of living beings.

Interdisciplinary Laboratory for Continental Environments – LIEC (CNRS, Université de Lorraine) / Resources 21 Laboratory of Excellence – LabEx R21

## 6 metal characters are hidden in this picture. Find them!

- Agathe Lanthanum is a jack of all trades who likes to fiddle around with batteries, optical lenses, lighters, etc. She can be easily recognised by her grey and malleable body.
- Wearing a headlamp, Gustave Cerium likes to work on motors and exhaust pipes. As the least rare rare-earth element, he is very polyvalent, hence his many arms!
- Extremely angry, Louise Gadolinium is toxic.
  For use in medical imagery, she is chained in a cage molecule which makes her harmless for the human body.
- Blaise **Neodymium** is magnetic. He is part of the many objects using magnets. But he's not very lucky, he attracts everything with iron in it!
- With his hypnotic red-green-blue eyes, Dario **Europium** is used to generate colour in the screens of smartphones and tablets. His fibrous aspect makes him look like a wet dog.
- Gérard Yttrium loves light. He never goes out without his string of luminous diodes and his light sabre.