

SPOTLIGHT

Three-Minute Videos to Learn About Marine Geochemistry

By Elena Masferrer Dodas, Catherine Jeandel, and Adrian Artis

The international GEOTRACES program (<https://www.geotraces.org/>) is a marine geochemical project involving scientists from more than 35 countries that aims to improve understanding of trace elements and their isotopes in the marine environment (Anderson, 2024, in this issue). However, terms such as trace elements and isotopes can be very challenging concepts to communicate to a non-scientific audience. GEOTRACES scientists face this difficulty when explaining their research to the general public. To overcome it, the GEOTRACES International Project Office launched a series of short (about three minutes) educational videos aimed at introducing and explaining the science of the GEOTRACES program to the general public. These videos explain marine geochemical science and concepts such as trace elements and isotopes in an easy and fun format while keeping the scientific message accurate. They also constitute a powerful teaching resource and offer an accessible and appealing method for students to learn about marine geochemistry.

To date, seven videos have been released, each focusing on a specific topic or trace element and isotope (Table 1). The videos are available on YouTube (including subtitles in up to 10 different languages), Youku (in Chinese), and on the GEOTRACES Education (GTED) landing page (<https://www.geotraces.org/GTEd>). They are also widely distributed on social media—watch and share them!

REFERENCE

Anderson, R.F. 2024. GEOTRACES reflections. *Oceanography* 37(2):8–12, <https://doi.org/10.5670/oceanog.2024.405>.

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TABLE 1. The series of GEOTRACES educational videos.



#1 THE INTERNATIONAL GEOTRACES PROGRAMME. Discover the International GEOTRACES Programme!

- YouTube: <https://youtu.be/IGUt4OZL2Z8>
- Youku: https://v.youku.com/v_show/id_XNTk0MzkyMTU0NA==.html



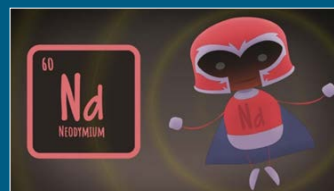
#2 ISOTOPES, TRACERS OF ORIGINS & CHRONOMETERS. Learn what isotopes are and why they have revolutionized our knowledge and understanding of the ocean.

- YouTube: <https://youtu.be/5fVbGVvw78s>
- Youku: https://v.youku.com/v_show/id_XNTk0MjE1MDcyOA==.html



#3 LEAD, HUMANS, AND OCEANS. Discover how scientists have found that lead pollution in the marine environment has been reduced.

- YouTube: <https://youtu.be/LmPe5bsjB0o>
- Youku: https://v.youku.com/v_show/id_XNTk0MjE1MzgyMA==.html



#4 NEODYMIUM, THE ELEMENT THAT ATTRACTS US. Not only is neodymium omnipresent in our daily lives (phones, cars, etc.), in the ocean it has important powers.

- YouTube: <https://youtu.be/u9KkyTMRNXk>
- Youku: https://v.youku.com/v_show/id_XNTk0NzY1ODQ1Mg==.html



#5 IRON, ESSENTIAL FOR LIFE IN THE OCEAN. Iron plays a fundamental role in marine ecosystems. However, detecting it in the ocean is like finding someone in a crowd of a hundred billion people.

- YouTube: <https://youtu.be/EpzEv0H4lvq>
- Youku: https://v.youku.com/v_show/id_XNTk2MzY4OTg3Ng==.html



#6 THORIUM, A LUMINOUS ELEMENT. This mysterious chemical element is used as a chronometer by scientists.

- YouTube: <https://youtu.be/RxKunSn4k4W4>
- Youku: https://v.youku.com/v_show/id_XNTk3NDM1MjU1Mg==.html



#7 RADIUM, A CHRONOMETER OF OCEAN CURRENTS. Discovered by Marie and Pierre Curie, radium is now used as a chronometer to calculate the time taken for coastal waters to reach the open ocean.

- YouTube: <https://youtu.be/q8DoMR7ZYzq>
- Youku: https://v.youku.com/v_show/id_XNTk3OTU0NjU4MA==.html