

“创刊30周年”专栏

## 非传统同位素体系标准物质研发进展

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### 摘要

新一代多接收同位素质谱仪为非传统同位素的高精度测量提供了有利的条件, 进而使得非传统同位素体系在地球学、环境学、海洋学、医学等领域的应用迅速发展, 但由于目前尚缺乏相关的同位素计量基、标准, 使如何获得可靠和可比的测量结果成为非传统同位素应用研究中的主要问题。因此, 研究发展、推广使用准确可靠的非传统同位素体系标准物质是支撑非传统同位素体系良好应用发展的关键要素之一。本文重点阐述了非传统同位素测量存在的主要问题, 有证非传统同位素标准物质的研发现状及其发展趋势, 旨在提高对研发和正确使用有证同位素标准物质重要性的认识, 促进我国同位素计量标准的良好发展和保障测量量值溯源作用的充分发挥。

关键词 [非传统同位素](#) [有证标准物质](#)

分类号

## Advance in Development of Non-traditional Isotope Certified Reference Materials

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### Abstract

A new generation of multi-collector isotope ratio mass spectrometers is now capable of measuring isotope ratios with extremely high precision for non-traditional isotope system. As a result, the application of non-traditional isotope system on geology, environmental science, oceanography, medicine and other fields is developing rapidly. However, as there is still lack of the related isotope primary/standard reference in metrology, it causes a key problem in terms of how to obtain reliability and comparability of measurement results for non-traditional isotopes applied research. Therefore, researching, developing and promoting the use of accurate and reliable isotope CRMs are a key element for underpinning a good application of non-traditional isotope system. This article reviews the main problems of the isotope measurement, R&D status and development trend related to the non-traditional isotopes. The emphasis is on raising the understanding for the importance of R&D and use the isotope CRMs, promoting the well development of isotopic metrology standards and insuring the fully playing the role of its measurement traceability.

**Key words** [non-traditional](#) [isotope](#) [certified](#) [reference](#) [materials](#)

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