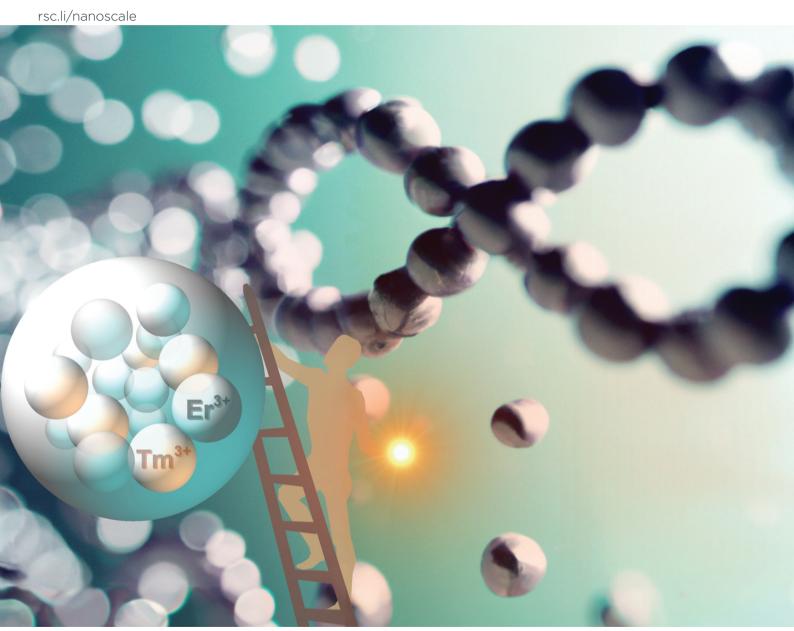
Volume 16 Number 4 28 January 2024 Pages 1431-2062

## Nanoscale



ISSN 2040-3372



## **PAPER**

Tomasz Grzyb *et al.*The use of energy looping between  $Tm^{3+}$  and  $Er^{3+}$  ions to obtain an intense upconversion under the 1208 nm radiation and its use in temperature sensing

