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| Titolo | The chemistry of superheavy elements / / Matthias Schadel, Dawn Shaughnessy, editors |
| Pubbl/distr/stampa | Heidelberg [Germany] : , : Springer, , 2014 |
| ISBN | 3-642-37466-2 |
| Edizione | [2nd ed. 2014.] |
| Descrizione fisica | 1 online resource (xiii, 521 pages) : illustrations (some color) |
| Collana | Gale eBooks |
| Disciplina | 539.7092 |
| Soggetti | Superheavy elements |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Synthesis of Super heavy Elements -- Nuclear Structure of Super heavy Elements -- Theoretical Chemistry of the Heaviest Elements -- Fundamental and Experimental Aspects of Single Atom-at-a-Time Chemistry -- Experimental Techniques -- Liquid-Phase Chemistry of Super heavy Elements -- Thermochemical Data from Gas-Phase Adsorption and Methods of their Estimation -- Gas-Phase Chemistry of Super heavy Elements -- Historical Reminiscences: The Pioneering Years of Super heavy Element Research. |
| Sommario/riassunto | The second edition of "The Chemistry of the Superheavy Elements" provides a complete coverage of the chemistry of a series of elements beginning with atomic number 104 – the transactinides or superheavy elements – including their nuclear properties and production in nuclear reactions at heavy-ion accelerators. The contributors to this work include many renowned scientists who, during the last decades, have made vast contributions towards understanding the physics and chemistry of these elusive elements, both experimentally and theoretically. The main emphasis here is on demonstrating the fascinating studies involved in probing the architecture of the Periodic Table at its uppermost end, where relativistic effects drastically influence chemical properties. All known chemical properties of these elements are described together with the experimental techniques applied to study these short-lived man-made elements one atom-at-a-time. The status of theoretical chemistry and of empirical models is presented as well as aspects of nuclear physics. In addition, one |

chapter outlines the meanderings in this field from a historical perspective and the search for superheavy elements in Nature.
