Sources

The D-Series Complete Bibliography

D1

- [1] Andy Brunning. #ChemistryAdvent #IYPT2019 Day 10: A periodic table of common ions. Compound Interest. Dec. 10, 2019. URL: https://www.compoundchem.com/2019advent/day10/ (visited on 02/19/2023).
- [2] Jim Clark. atomic and physical properties of period 3 elements. ChemGuide. URL: https://chemguide.co.uk/inorganic/period3/elementsphys.html#top (visited on 02/19/2023).
- [3] Jim Clark. intermolecular bonding van der Waals forces. ChemGuide. URL: https://chemguide.co.uk/atoms/bonding/vdw.html (visited on 02/19/2023).
- [4] B. D. Cullity and C. D. Graham. *Introduction to magnetic materials*. 2nd ed. Hoboken, N.J: IEEE/Wiley, 2009. 544 pp. ISBN: 978-0-471-47741-9.
- [5] Larry Gonick and Craig Criddle. *The cartoon guide to chemistry*. In collab. with Internet Archive. New York: HarperResource, 2005. 264 pp. ISBN: 978-0-06-093677-8. URL: http://archive.org/details/cartoonguidetoch00gonirich (visited on 02/19/2023).
- [6] N. N. Greenwood and A. Earnshaw. *Chemistry of the elements*. 2nd ed. Oxford; Boston: Butterworth-Heinemann, 1997. 1341 pp. ISBN: 978-0-7506-3365-9.
- [7] Mike Jackson. "Wherefore Gadolinium? Magnetism of the Rare Earths". In: The IRM Quarterly 10.3 (2000). URL: https://conservancy.umn.edu/bitstream/handle/11299/171280/irmq10-3.pdf.
- [8] F.G. Kondev et al. "The NUBASE2020 evaluation of nuclear physics properties *". In: *Chinese Physics C* 45.3 (Mar. 1, 2021), p. 030001. ISSN: 1674-1137, 2058-6132. DOI: 10.1088/1674-1137/abddae. URL: https://iopscience.iop.org/article/10.1088/1674-1137/abddae (visited on 02/18/2023).
- [9] Juris Meija et al. "Atomic weights of the elements 2013 (IUPAC Technical Report)". In: Pure and Applied Chemistry 88.3 (Mar. 1, 2016), pp. 265-291. ISSN: 1365-3075, 0033-4545. DOI: 10.1515/pac-2015-0305. URL: https://www.degruyter.com/document/doi/10.1515/pac-2015-0305/html (visited on 02/19/2023).
- [10] Juris Meija et al. "Isotopic compositions of the elements 2013 (IUPAC Technical Report)". In: Pure and Applied Chemistry 88.3 (Mar. 1, 2016), pp. 293-306. ISSN: 1365-3075, 0033-4545. DOI: 10.1515/pac-2015-0503. URL: https://www.degruyter.com/document/doi/10.1515/pac-2015-0503/html (visited on 02/19/2023).
- [11] metal structures. URL: https://chemguide.co.uk/atoms/structures/metals.html#top (visited on 02/19/2023).
- [12] metallic bonding. URL: https://chemguide.co.uk/atoms/bonding/metallic.html (visited on 02/19/2023).
- [13] mlblevins. A Complete List of Man-made Synthetic Elements. Science Struck. June 15, 2009. URL: https://sciencestruck.com/synthetic-elements (visited on 02/19/2023).
- [14] "Nomenclature of Inorganic Chemistry IUPAC Recommendations 2005". In: Chemistry International Newsmagazine for IUPAC 27.6 (Jan. 2005). ISSN: 1365-2192, 0193-6484. DOI: 10.1515/ci.2005.27.6.25. URL: https://www.degruyter.com/document/doi/10.1515/ci.2005.27.6.25/html (visited on 02/19/2023).
- [15] Periodic Table Royal Society of Chemistry. URL: https://www.rsc.org/PERIODIC-TABLE (visited on 02/19/2023).

- [16] Periodic Table of Elements IUPAC International Union of Pure and Applied Chemistry.

 URL: https://iupac.org/what-we-do/periodic-table-of-elements/ (visited on 02/19/2023).
- [17] Thomas Prohaska et al. "Standard atomic weights of the elements 2021 (IUPAC Technical Report)". In: Pure and Applied Chemistry 94.5 (May 25, 2022), pp. 573-600. ISSN: 0033-4545, 1365-3075. DOI: 10.1515/pac-2019-0603. URL: https://www.degruyter.com/document/doi/10.1515/pac-2019-0603/html (visited on 02/19/2023).
- [18] Neo Skinner. D2 Properties of Elements. 2023. URL: https://skinnerscience.neoski.tk/datasheets/D2.
- [19] John David Smith and J. D. Smith. *The chemistry of arsenic, antimony and bismuth*. Pergamon texts in inorganic chemistry v. 2. Oxford, England New York: Pergamon Press, 1975. ISBN: 978-0-08-018778-5.
- [20] synthetic elements Infoplease. URL: https://www.infoplease.com/encyclopedia/science/chemistry/elements/synthetic-elements (visited on 02/19/2023).
- [21] The periodic table of the elements by WebElements. URL: https://www.webelements.com/(visited on 02/19/2023).
- [22] The trend from non-metal to metal in Group 4. URL: https://chemguide.co.uk/inorganic/group4/properties.html (visited on 02/19/2023).
- [23] Wolfram—Alpha: Making the world's knowledge computable. URL: https://www.wolframalpha.com (visited on 02/19/2023).

D2

- [1] "Atomic Weights and Isotopic Compositions with Relative Atomic Masses". In: NIST (Aug. 23, 2009). Last Modified: 2021-09-02T10:10-04:00. URL: https://www.nist.gov/pml/atomic-weights-and-isotopic-compositions-relative-atomic-masses (visited on 02/19/2023).
- [2] D. Glotzel. "Ground-state properties of f band metals: lanthanum, cerium and thorium". In: Journal of Physics F: Metal Physics 8.7 (July 1978), p. L163. ISSN: 0305-4608. DOI: 10.1088/0305-4608/8/7/004. URL: https://dx.doi.org/10.1088/0305-4608/8/7/004 (visited on 02/19/2023).
- [3] "Ground Levels and Ionization Energies for the Neutral Atoms". In: NIST (July 21, 2009). Last Modified: 2019-11-25T15:36-05:00. DOI: 10.18434/T42P4C. URL: https://www.nist.gov/pml/ground-levels-and-ionization-energies-neutral-atoms (visited on 02/19/2023).
- [4] John William Hill and Ralph H. Petrucci. General chemistry: an integrated approach. In collab. with Internet Archive. Upper Saddle River, N.J.: Prentice Hall, 2002. 1242 pp. ISBN: 978-0-13-033445-9. URL: http://archive.org/details/generalchemistry00hill (visited on 02/19/2023).
- [5] W.J. Huang et al. "The AME 2020 atomic mass evaluation (I). Evaluation of input data, and adjustment procedures*". In: Chinese Physics C 45.3 (Mar. 1, 2021), p. 030002. ISSN: 1674-1137, 2058-6132. DOI: 10.1088/1674-1137/abddb0. URL: https://iopscience.iop.org/article/10.1088/1674-1137/abddb0 (visited on 02/18/2023).
- [6] Norbert Adolph Lange. Lange's handbook of chemistry. Ed. by John A. Dean. 15. ed. McGraw-Hill handbooks. New York, NY: McGraw-Hill, 1999. ISBN: 978-0-07-016384-3.

- [7] Terry L. Meek and Leland C. Allen. "Configuration irregularities: deviations from the Madelung rule and inversion of orbital energy levels". In: *Chemical Physics Letters* 362.5 (Aug. 26, 2002), pp. 362–364. ISSN: 0009-2614. DOI: 10.1016/S0009-2614(02)00919-3. URL: https://www.sciencedirect.com/science/article/pii/S0009261402009193 (visited on 02/19/2023).
- [8] Juris Meija et al. "Isotopic compositions of the elements 2013 (IUPAC Technical Report)". In: Pure and Applied Chemistry 88.3 (Mar. 1, 2016), pp. 293-306. ISSN: 1365-3075, 0033-4545. DOI: 10.1515/pac-2015-0503. URL: https://www.degruyter.com/document/doi/10.1515/pac-2015-0503/html (visited on 02/19/2023).
- [9] Melvyn P. Melrose and Eric R. Scerri. "Why the 4s Orbital Is Occupied before the 3d". In: Journal of Chemical Education 73.6 (June 1, 1996). Publisher: American Chemical Society, p. 498. ISSN: 0021-9584. DOI: 10.1021/ed073p498. URL: https://doi.org/10.1021/ed073p498 (visited on 02/19/2023).
- [10] Lester R. Morss et al., eds. *The chemistry of the actinide and transactinide elements*. 3rd ed. OCLC: ocm61180778. Dordrecht: Springer, 2006. 5 pp. ISBN: 978-1-4020-3598-2.
- [11] NIST Atomic Ionization Energies Output. URL: https://physics.nist.gov/cgi-bin/ASD/ie.pl?spectra=H-DS+i&units=1&at_num_out=on&el_name_out=on&shells_out=on&level_out=on&e_out=on&biblio=on (visited on 02/18/2023).
- [12] Eric Scerri7 November 2013. The trouble with the aufbau principle. RSC Education. URL: https://edu.rsc.org/feature/the-trouble-with-the-aufbau-principle/2000133. article (visited on 02/19/2023).
- [13] Periodic Table of Elements IUPAC International Union of Pure and Applied Chemistry. URL: https://iupac.org/what-we-do/periodic-table-of-elements/ (visited on 02/19/2023).
- [14] Thomas Prohaska et al. "Standard atomic weights of the elements 2021 (IUPAC Technical Report)". In: Pure and Applied Chemistry 94.5 (May 25, 2022), pp. 573-600. ISSN: 0033-4545, 1365-3075. DOI: 10.1515/pac-2019-0603. URL: https://www.degruyter.com/document/doi/10.1515/pac-2019-0603/html (visited on 02/19/2023).
- [15] John R. Rumble, Thomas J. Bruno, and Maria J. Doa. *CRC handbook of chemistry and physics:* a ready reference book of chemical and physical data. 103rd ed. Boca Raton, Fla: CRC press, 2022. ISBN: 978-1-03-212171-0.
- [16] Eric R. Scerri. "Five ideas in chemical education that must die". In: Foundations of Chemistry 21.1 (Apr. 1, 2019), pp. 61–69. ISSN: 1572-8463. DOI: 10.1007/s10698-018-09327-y. URL: https://doi.org/10.1007/s10698-018-09327-y (visited on 02/19/2023).
- [17] The periodic table of the elements by WebElements. URL: https://www.webelements.com/(visited on 02/19/2023).
- [18] Koichiro Umemoto and Susumu Saito. "Electronic Configurations of Superheavy Elements". In: Journal of the Physical Society of Japan 65.10 (Oct. 15, 1996). Publisher: The Physical Society of Japan, pp. 3175–3179. ISSN: 0031-9015. DOI: 10.1143/JPSJ.65.3175. URL: https://journals.jps.jp/doi/10.1143/JPSJ.65.3175 (visited on 02/19/2023).
- [19] Eric W. Weisstein. Electron Orbital from Eric Weisstein's World of Physics. Publisher: Wolfram Research, Inc. URL: https://scienceworld.wolfram.com/physics/ElectronOrbital.html (visited on 02/19/2023).
- [20] Wolfram—Alpha: Making the world's knowledge computable. URL: https://www.wolframalpha.com (visited on 02/19/2023).

D4

[1] Neo Skinner. D5 - Properties of Elementary Particles. 2023. URL: https://skinnerscience.neoski.tk/datasheets/D5.

D5

- [1] Life of the Higgs boson CMS Experiment. URL: https://cms.cern/news/life-higgs-boson (visited on 02/20/2023).
- [2] Particle Data Group. Particle Data Group. URL: https://pdg.lbl.gov/(visited on 02/20/2023).
- [3] Particle Data Group et al. "Review of Particle Physics". In: Progress of Theoretical and Experimental Physics 2022.8 (Aug. 8, 2022), p. 083C01. ISSN: 2050-3911. DOI: 10.1093/ptep/ptac097. URL: https://academic.oup.com/ptep/article/doi/10.1093/ptep/ptac097/6651666 (visited on 02/18/2023).

D6

- [1] BIPM. Le Système international d'unités / The International System of Units ('The SI Brochure'). Ninth. Bureau international des poids et mesures, 2019. ISBN: 978-92-822-2272-0. URL: http://www.bipm.org/en/si/si_brochure/.
- [2] David B Newell and Eite Tiesinga. The international system of units (SI):: 2019 edition. NIST SP 330-2019. Gaithersburg, MD: National Institute of Standards and Technology, Aug. 2019, NIST SP 330-2019. DOI: 10.6028/NIST.SP.330-2019. URL: https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.330-2019.pdf (visited on 02/20/2023).

D7

- [1] BIPM. Le Système international d'unités / The International System of Units ('The SI Brochure'). Ninth. Bureau international des poids et mesures, 2019. ISBN: 978-92-822-2272-0. URL: http://www.bipm.org/en/si/si_brochure/.
- [2] David B Newell and Eite Tiesinga. The international system of units (SI):: 2019 edition. NIST SP 330-2019. Gaithersburg, MD: National Institute of Standards and Technology, Aug. 2019, NIST SP 330-2019. DOI: 10.6028/NIST.SP.330-2019. URL: https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.330-2019.pdf (visited on 02/20/2023).

D8

[1] CH103 - CHAPTER 3: Radioactivity and Nuclear Chemistry - Chemistry. URL: https://wou.edu/chemistry/courses/online-chemistry-textbooks/ch103-allied-health-chemistry/ch103-chapter-3-radioactivity/ (visited on 02/20/2023).

- [2] F.G. Kondev et al. "The NUBASE2020 evaluation of nuclear physics properties *". In: Chinese Physics C 45.3 (Mar. 1, 2021), p. 030001. ISSN: 1674-1137, 2058-6132. DOI: 10.1088/1674-1137/abddae. URL: https://iopscience.iop.org/article/10.1088/1674-1137/abddae (visited on 02/18/2023).
- [3] Radioactive decay Radiology Cafe. Mar. 16, 2017. URL: https://www.radiologycafe.com/frcr-physics-notes/basic-science/radioactive-decay/ (visited on 02/20/2023).