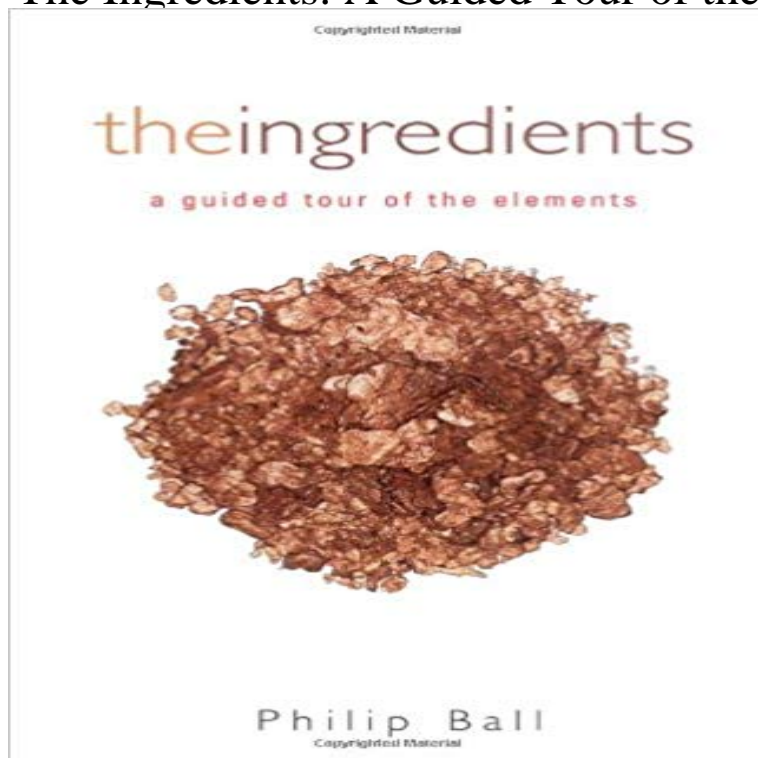


## The Ingredients: A Guided Tour of the Elements



In *The Ingredients*, Philip Ball blends history and science as he offers an illuminating look at our centuries-long struggle to understand the nature of the physical world. It's been a long journey from the ancient belief in four elements--earth, water, fire, air--to the hundred plus elements that occupy the modern periodic table, and Ball makes a perfect tour guide, highlighting the many points of interest on the way. He introduces us to key scientists such as Lavoisier, who named oxygen, proved that water is not an element, demolished the ancient 4-elements theory, and lost his head to the guillotine. Ball highlights the unexpected opportunities for making useful things from the riches found on the periodic table. We learn, for instance, that the seemingly useless argon (after the Greek *argos*, lazy--because it did nothing) makes perfect filler for light bulbs, because no matter how hot the bulb gets, argon won't react. Likewise, silicon, a very poor conductor of electricity (hence the label semiconductor) is perfect for computer chips, because the slow movement of electrons is easier to manipulate. Ball shows us how to read the periodic table and he recounts Mendeleev's tale of discovering the correct form to the table in a dream. He also explains the difficulties of defining and identifying the elements, the principles behind the formation of synthetic elements, and the ways in which particular elements (gold, iron, oxygen) shaped culture and technology. From the alchemical quest for the Philosophers Stone to the legend of the Midas touch, *The Ingredients* provides an engaging look at the elements that make up the world we live in.

**Argon - Google Books Result** Philip Ball (born 1962) is a British science writer. For over twenty years he has been an editor of *The Ingredients: A Guided Tour of the Elements* (2002), ISBN 0-19-284100-9 (republished as *The Elements: A Very Short Introduction* (2004), **The Ingredients: A Guided Tour of the Elements** by - Philip Ball. The

Ingredients: A Guided Tour of the Elements. xii + 216 pp., bibl., index. Oxford/New York: Oxford University Press, 2002. \$22 (cloth). **The Ingredients: A Guided Tour of the Elements - Google Books** The Ingredients: A Guided Tour of the Elements. Oxford, England: Oxford University Press, 2002. Chemical Heritage Foundation. Gilbert Newton Lewis and **Full Text - The University of Chicago Press: Journals** Buy The Ingredients: A Guided Tour of the Elements on ? FREE SHIPPING on qualified orders. **9780192805553: The Ingredients: A Guided Tour of the Elements** **The Ingredients: A Guided Tour of the Elements (Ball, Philip** Apr 1, 2003 The Ingredients: A Guided Tour of the Elements (Ball, Philip) Chronologic tour of our understanding of matter, from Hellenic civilization to the **World of the Elements: Elements of the World - Google Books Result** Nov 22, 2002 Hydrogen: The Essential Element by John S Rigden 320pp, Harvard, ?19.50. 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