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Nota di contenuto	ch. 1. Introduction: chemistry and its discontents. The philosophy of chemistry. The image of chemistry. The goals of the book. The structure of the book -- ch. 2. Chemistry and pollution. Chemistry versus natural. Chemistry in literature. Silent spring. "Better things for better living ... through chemistry". Abundance and waste. Courting disaster. Artificial or natural? -- ch. 3. The damnation of the alchemist. Magicians or charlatans. In defense of artifice. Faustian ambitions. From extracts to ersatz. Pure and applied chemistry. Artefacts as hybrids of nature and society -- ch. 4. The space of the laboratory. Chemical recipe books. A space of toil. Seeing at a glance. A purified space. A social space. An instrumental space -- ch. 5. Proof in the laboratory. Chemical experiment as public spectacle. Instruments of decision. The power of scepticism. The price of proof. The limits of proof -- ch. 6. Chemistry creates its object. The different meanings of synthesis. From simple to complex. From fictions to artefacts. A creative process -- ch. 7. A duel between two conceptions of matter. The ancient concept of phusis. Atoms versus elements; two rival systems. Is chemistry Aristotelian? The aporia of the mixt. Mixts or compounds, Stahl or Lavoisier. A vexing question -- ch. 8. Chemistry versus physics. To each science its ontology. The ultimate quest. No

matter without qualities. No matter without agency -- ch. 9. Atoms or elements. Mendeleev's wager. Renewing Mendeleev's wager. Who's afraid of reductionism? Between the macro and the micro -- ch. 10. Positivism and chemistry. A variety of positivisms. Chemistry as the model for positive science. Positivism as an obstacle? Positivism versus realism -- ch. 11. Atoms as fictions. Writing formulae. Types and models. Agnostic atomism. Atoms as mediators. The phenomenalist response. The instrumentalist response. The energetist response -- ch. 12. Agency and relations. Elements as actors. Operational realism. Alternative metaphors -- ch. 13. Taming the nanoworld. Bottom-up versus top-down. Rational design. Bio-inspired chemistry. The return of chemistry's Faustian ambitions. The rise of chemistry's philosophical ambitions -- ch. 14. Towards a responsible chemistry. Concerns about the future. The chemist's code of conduct. From prudence to precaution. A new chemical culture?

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Sommario/riassunto

This book uses history to introduce central issues in the philosophy of chemistry. Mobilizing the theme of impurity, it explores the tradition of chemistry's negative image. It then argues for the positive philosophical value of chemistry, reflecting its characteristic practical engagement with the material world. The book concludes with some ethical reflections concerning chemistry's orientations in the twenty-first century. The authors have previously both offered significant contributions to the history and philosophy of chemistry.

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