In his *Sceptical Chymist* Boyle presents the results of his experiments and a programme for the future of the science, attempting to bring order and clarity to chemistry through a critical examination of received opinion.

Boyle, Robert. *The Sceptical Chymist: or Chymico-Physical Doubts & Paradoxes, Touching the Spagyrist's Principles, Commonly call'd Hypostatical*…. London, Printed by J. Cadwell for J. Crooke, 1661. 6 ¾ inches (170 mm), [18], 34, [2], 35–442, [2] pp.

A scientist of exceptional range and curiosity, even in that age of the universal genius, Robert Boyle (1627–1691) was a founder of the Royal Society, wealthy and well-connected, and the leading British scientist of his time. *The Sceptical Chymist* is a diatribe in the form of a dialogue, presenting both the results of Boyle's experiments and a programme for the future of the science, attempting to bring order and clarity to chemistry through a critical examination of received opinion. The characters in the dialogue, a form perhaps adopted from Galileo's *Dialogue on the Two Chief World Systems,* which Boyle had read in Florence on the Grand Tour at the age of fifteen, are Themistius (the Aristotelian) and Carneades (Boyle himself). The Sceptical Chymist is urged to release his Inner Physicist, to break loose from the tyranny of practical medicine (with its manufacture of drugs) and mystical alchemy (with its transformation of metals) in order to be free to investigate the true relations between chemical substances. The full title-page, with its trenchant invocation of scientific jargon—"Spagyrist's principles, commonly called Hypostatical"—sets the tone for the book. Boyle welcomed clarity of expression, and gave examples of an approach to the ideal in his own definitions, condemning the allegorical, hermetic, or enigmatical expressions current among the alchemists—"those Dialectical subtleties that the Schoolmen too often employ about Physiological Mysteries" (page 14, **Spread 19**).

Boyle's experiments had led him to believe that the traditional Aristotelian quartet of Earth, Air, Fire, and Water was too restricted a group of "elements" to explain every chemical change. He was just as severe on the conventional elements of the Parascelsians, amending the title page of his second edition (1680) to read (in part) *"Doubts & Paradoxes, touching the Experiments whereby Vulgar Spagirists Are wont to*

Endeavour to Evince their Salt, Sulphur and Mercury, to be The True Principles of Things." The actual building blocks of the universe were far smaller units, Boyle claimed, and vastly more numerous. Genuine chemical elements should not be subject to decomposition, but rather, be "primitive or simple, or perfectly unmingled bodies" (page 350). The interrelations and interreactions of such chemical substances determined every observed phenomenon.

Matter, according to Boyle, was corpuscular, consisting of particles or atoms in motion, now clustering, now colliding. For all his attention to the atomic and the elemental, Boyle did not give either concept quite the modern meaning. It was left to Newton, Lavoisier, and Dalton to refine and bring to theoretical perfection the theories adumbrated within *The Sceptical Chymist*.

The bookplate of Magdalen College, Oxford, may be seen on **Spread 4**, with the note "Duplicate sold by T.W." This is presumably the Rev. Thomas West (ca. 1711–81), one of those torpid bachelor dons that Edward Gibbon has condemned for all time as "the Monks of Magdalen": as the historian wrote in his *Memoirs,* "From the toil of reading, or thinking, or writing, they had absolved their conscience." West was librarian from 1746 until his death.