

Pseudo-Lull, John Dee, and the Experimenta

Ramon Llull was one of the great intellectual figures of the medieval Mediterranean, but the alchemical works attributed to him were not written by him. Modern scholarship therefore uses the term pseudo-Lullian for the large alchemical corpus that developed under his name.

That distinction does not reduce the historical importance of the texts. Pseudo-Lullian alchemy became one of the most influential bodies of chemical writing in Europe. It circulated in manuscripts, entered print, and was read by later experimenters.

Among these works is the Experimenta.

A sixteenth-century manuscript at Trinity College Cambridge, MS O.8.28, preserves the *Liber experimentorum Raymundi Lullii*. Its provenance is unusually vivid. The manuscript records that it was copied in Rome for John Dee and sent to him in 1564. Dee himself noted that he received it in Antwerp on February 28 of that year.

This matters because John Dee is not a legendary figure invented by later occultism. He was a mathematician, astrologer, collector, adviser, and serious reader of natural philosophy. A dated manuscript in his possession places the Experimenta tradition firmly inside sixteenth-century learned culture.

A later witness copied by Isaac Newton preserves the Experimenta in a form that allows us to see the sixth experiment clearly. It begins with morning urine from boys of roughly eight or twelve years of age. The urine is putrefied until it becomes black. The process then turns toward distillation, separation of a spirit, treatment of the residue, calcination toward whiteness, extraction of salt, and repeated purification.

That sequence is extraordinary because it brings together the exact elements that later urine-centered readings emphasize:

morning urine, putrefaction, blackening, distillation, Spirit, Earth or residue, whitening, salt.

FIGURE 6

Clavis Artis: conjunction in the vessel



*Clavis Artis, Biblioteca Civica Hortis, Trieste, MS 2-27, vol. 2, p. 24 (1738).
Public-domain reproduction. The urine interpretation is the author's reading of the
image.*

From Urine to Phosphorus

The discovery of phosphorus is the moment when the story of urine leaves the symbolic world and enters the periodic table.

Hennig Brand's exact procedure has been retold in many forms, and later accounts often exaggerate quantities or simplify the chemistry. What matters here is the basic fact: Brand was processing urine in 1669 while pursuing the Philosopher's Stone, and the operation produced a new luminous substance.

The material was extraordinary. It could glow faintly in air. It was waxy. It was reactive. It demanded careful handling. Nothing in ordinary seventeenth-century experience made it look like a routine salt.

The name phosphorus, meaning light-bearer, was already connected to luminous phenomena more broadly, but Brand's substance gave the word a new chemical identity.

Modern chemistry explains why urine could lead to phosphorus. Urine contains phosphate. Under sufficiently severe reducing conditions, phosphate compounds can ultimately yield elemental phosphorus. Brand did not know the molecular or atomic mechanism. He discovered the route empirically.

This book deliberately avoids reproducing an operational phosphorus recipe. White phosphorus is highly toxic and dangerously reactive. The historical point does not require a laboratory reenactment.

What matters is the conceptual chain. Urine was concentrated. Its nonvolatile mineral content became important.

Phosphate, invisible as an element to the alchemist, remained embedded in the residue.

Under extreme processing, a new volatile substance emerged.

The alchemist had searched for a hidden principle and found one in the most literal possible sense: an element that had been present in compound form all along.

That is why Brand's discovery is so symbolically powerful.

Was Phosphorus Discovered Before Brand?

Once we know that urine alchemy existed long before 1669, an obvious question appears: did anyone accidentally make phosphorus before Brand?

The answer is not known.

But the question is legitimate.

A particularly intriguing medieval text is the *Ordinatio Alchid Bechil*, preserved in Paris, Bibliothèque nationale de France, Latin 7156, folios 143r to 143v. The manuscript tradition is obscure. The text presents itself under the name of a Saracen philosopher, but modern scholarship has not established a secure Arabic original. It may belong to a Latin or Iberian environment shaped by Arabic terminology.

Nineteenth-century historian Ferdinand Hoefer reported that the text described a preparation involving urine and mineral and carbonaceous materials, yielding something called an artificial carbuncle or *bona luna*. Later historians noticed that the material combination sounded chemically suggestive of phosphorus production.

This does not prove a medieval discovery of phosphorus.

The missing evidence is behavioral.

White phosphorus is memorable. It glows in air and can ignite. A text that clearly described spontaneous luminosity, unusual waxiness, or dangerous ignition would make the identification much stronger.

So far, the reported description does not provide that decisive signature.

The word carbuncle is tempting because medieval literature sometimes associated carbuncles with glowing stones, but a name is not a chemical analysis. Carbuncle could also refer to a red gem-like appearance or to a traditional category of stones.

The safest conclusion is therefore provocative but limited: medieval alchemy may have approached the chemical conditions capable of

Was the Philosopher's Stone Real?

The answer depends on what we mean by real.

If the Philosopher's Stone means a reproducible chemical substance that converts ordinary base metals into elemental gold in bulk, then no credible evidence demonstrates its existence. Modern atomic theory explains why ordinary chemistry cannot perform that transformation.

If the Stone means a universal medicine capable of curing all disease, reversing aging, and granting indefinite life, there is likewise no reliable evidence for such a material.

But if the question is whether alchemists produced extraordinary substances and interpreted them as stages or forms of the Stone, the answer is certainly yes.

They produced alloys, pigments, salts, acids, alkalis, amalgams, sublimates, crystals, glassy materials, metallic trees, luminescent compounds, and eventually phosphorus.

Some of these materials behaved so dramatically that the language of perfection was almost inevitable.

The mistake is to treat "the Stone" as if it must refer to one object in every century.

The historical record suggests several Stones. There is the metallic Stone of mercury, sulfur, antimony, gold, and silver. There is the medical Stone or elixir. There is the alkahest-like dream of opening matter. There is the urine-based animal work. There is the philosophical Stone as a model of nature's unity. There is the later spiritual Stone of psychological interpretation. These traditions overlap, borrow language, and sometimes contradict one another.

The urine interpretation developed in this book belongs to one of them. I believe the evidence is strong that urine was not a marginal curiosity but a genuine alchemical material with its own tradition of putrefaction, distillation, salt extraction, purification, and recombination. I also believe