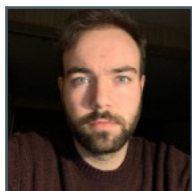


The Artifactual Age of Chemistry: Designing, Not Discovering



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Recent debates in philosophy of science and technology invite a reconsideration of the epistemic status of chemistry. Although historically classified as a natural science, contemporary chemical research increasingly operates as a technological enterprise rather than as a discipline oriented toward the discovery of new laws, paradigms, or fundamental theoretical models. Most current work, particularly in synthetic organic and inorganic chemistry, focuses on the design, production, and stabilization of novel molecular entities. These entities function as artefacts—purpose-built materials engineered to exhibit specific structural, functional, or reactivity profiles—rather than as objects passively disclosed by nature. In this sense, chemical practice resembles technological fabrication more than theory-driven scientific inquiry.

This shift does not imply a loss of scientific relevance; rather, it highlights the fact that chemistry's core activities are now predominantly constructive, interventionist, and oriented toward material innovation. Instrumental mediation, standardized protocols, and computational design frameworks further reinforce the technological character of the field, shaping what can be produced, observed, and practically deployed. As a result, chemistry today contributes less to the formulation of new overarching theoretical structures and more to the expansion of the technomaterial environment in which contemporary societies operate.

Interpreting chemistry as a technology clarifies its ontological and normative implications. It positions chemists as designers of material artefacts, emphasizes the socio-technical consequences of molecular production, and invites a philosophical framework that integrates epistemology, ethics, and technology studies. A technological reading of chemistry thus provides a more accurate account of its current practices and their role in shaping both scientific knowledge and the material world.

Biography:

Víctor Martínez-Martínez holds a degree in Chemistry and a PhD in Science Education, with a dissertation focused on the nature of science and STEM education. He is currently completing a master's degree in Logic and Philosophy of Science, deepening his engagement with the conceptual foundations of scientific practice. His research is driven by the conviction that insights from philosophy of science and social studies of science are essential for improving scientific literacy and educational practice. He works to integrate these perspectives into curriculum design, teacher training, and the broader understanding of how science operates within contemporary societies.