

The philosophy of chemistry: ten years later

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It has been exactly 10 years since the last special issue of *Synthese* was devoted exclusively to the philosophy of chemistry, which itself marked a first in the field. At that time (in 1997) philosophy of chemistry was still struggling for recognition and it was in no small part the boost in visibility that *Synthese* provided that helped to found the discipline. A lot has changed in the last 10 years.

For one thing, it no longer seems valid to claim that work in the philosophy of chemistry is neglected. As the work of its practitioners has demonstrated the philosophical merits of turning our attention to the special problems of reduction, emergence, laws, supervenience, and explanation as they exist in chemistry, so the reputation of the field has grown. Correspondingly, the venues for work in the philosophy of chemistry have multiplied. There are now not just one but *two* journals that are specifically devoted to work in the philosophy of chemistry: *Foundations of Chemistry*¹ and *Hyle*² (both of which are available both in print and on-line). Several excellent monographs and anthologies have recently been published³ and more are on the way (Scerri, 2006). The International Society for the Philosophy of Chemistry (ISPC) now boasts a membership of 145 people from 28 countries and its 10th annual meeting is due to be held in Split, Croatia from August 6th–10th, 2006.⁴ Philosophers of chemistry no longer have to beg for a place on the biennial program of the Philosophy of Science Association (PSA) either. The prestigious Boston Studies in the Philosophy of Science just devoted its first title to work in the philosophy of chemistry (Baird, Scerri, & McIntyre, 2006). And there are now various small conferences and symposia at colleges and

¹ Springer Publishers, <http://www.springer.com/west/home?SGWID=4-102-70-35545882-0&refer=www.wkap.nl>

² [Http://www.hyle.org/index.html](http://www.hyle.org/index.html)

³ Note in particular Bhushan and Rosenfeld (2000), Van Brakel (2000).

⁴ [Http://ispc.sas.upenn.edu](http://ispc.sas.upenn.edu)

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universities around the world that feature work by scholars in the field. During the last ten years the philosophy of chemistry has not just emerged, it has thrived.

One recent symposium that featured work in the philosophy of chemistry—entitled “Making Molecules Matter”—was held as part of the Boston Colloquium for the Philosophy of Science at Boston University in October of 2005. Three of the papers that were presented at that venue form the core of the current issue of *Synthese*. That each takes up such a different topic, yet nonetheless ties back to the locus of the symposium, speaks well of the field, for it is a sure sign of maturity in the philosophy of chemistry that there are now well-recognized areas of current debate—such as the question of whether the relationship between chemistry and physics is a paradigm case for reduction—that are causing philosophers to rethink what had appeared to be a long-settled issue. Indeed, a recent paper by Olimpia Lombardi and Martin Labarca (which recently appeared in *Foundations of Chemistry*)⁵ goes so far as to argue in favor of the *ontological* autonomy of chemistry; this has caused quite a splash in the field and is the subject of much current debate.

Through all of this work, the philosophy of chemistry is fulfilling its original promise to create ferment throughout the philosophy of science—and beyond to the philosophy of mind and epistemology—as scholars examine the intellectual foundations of many of the analogies and theoretical assumptions that have served as the basis for reductive theories throughout the disciplines, that were created on the firm belief that the relationship between physics and chemistry presented a *prima facie* case for reductive explanation. What further epistemological fallout remains as the battle lines continue to shift, as philosophers of chemistry turn their attention to other hot topics such as whether there can be causes or laws at the secondary level in chemistry or whether the much-ballyhooed paradigms of anomalous monism and non-reductive materialism (that were created to bring peace to the mind/body debate in the philosophy of mind) make any sense when applied to the philosophy of chemistry?

It is of course impossible to predict the direction that any growing field will take. If the last decade has proven to be so fruitful for the philosophy of chemistry, who can guess what fault lines, or consensus, the next 10 years might bring? One can only hope that along the way, this will be but the first of many updates in the flagship philosophical journals like *Synthese* and *Philosophy of Science*, that report news from the front about what all of those philosophers of chemistry might be up to next.

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⁵ Vol. 7, #2, (2005), pp. 125–148.