Scientific Objects and their Materiality in the History of Chemistry

Workshop at the Max Planck Institute for the History of Science, Berlin, Germany
June 24–26, 2010

Call for Papers

For both experimental inquiry and technical application, the sciences depend on working with material things and processes. In this respect, chemistry is arguably the material science par excellence, primarily through the crucial role of the synthesis of chemical compounds, and the strong interactions with technological institutions and industry. In terms of the representation of its objects of inquiry, chemistry has a peculiarly materialized semiology in a long-standing tradition of graphic formulae and three-dimensional structural models, as well as a rich heritage of ordering systems such as the periodic table. In the middle-ground between representation and intervention there stand certain kinds of principles and entities, some of them invisible, that are both objects of experimental inquiry and theoretical speculation. Concepts such as the atom, element, or phlogiston have laid the groundwork for chemical research in defining the units of ordering systems, constituting the goals for material production, serving as limitations to the extent of chemical practice, or having crucial heuristic roles. And all of them have experienced variation, re-definition, development, suppression, and sometimes even extinction in the course of history. It is the aim of this conference to track down the history of such superordinated scientific concepts and objects, and to contribute to the understanding of their working modes. Commonly, the materiality of scientific objects has been described by two, arguably conflicting, dimensions: First, by studies of materially-intervening practice, the ways in which 'real things' are involved in and condition such practice. Second, by the significance and meaning ascribed to things in discursive practice. These two dimensions are not necessarily in contradiction, and their tension can be used in productive and innovative ways. The proposed conference will build on these traditions and their tensions, focusing multi-disciplinary efforts on a single science and its concepts and objects of inquiry. However, it most importantly seeks to yield new directions in history of chemistry, concentrating on the relation of the concepts of this science, their embodiment in experimental techniques, instruments, and material substances, their representations, and their subsequent re-definition. Moreover, although the conference is based on cutting-edge themes in history of science and wishes to contribute to their development, ist projected audience escapes the boundaries of this field, and extends into history, science studies,

philosophy of science, and of course chemistry itself.

Topics may center on one of the following concepts/objects. This list is meant as being indicative, not exclusive:

- earth, air, water, fire, ethe
- sal, mercur, sulfur
- phlogiston, caloric, oxygen, lumière
- element, compound, composition, mixture, alloy
- electron, atom, bond, molecule, structure
- polymer, colloid, crystal, glass
- salt, base, acid
- metal, halogen, rare earth
- gas, liquid, solid, plasma
- natural product, synthetic product
- supramolecular, nano
- pure, impure
- chemical reaction

The workshop will consist of ca. 15 precirculated papers. We await proposals with a length of max. 350 words by December 1, 2009.
Inquiries and abstracts should be sent by email to carsten.reinhardt@uni-bielefeld.de

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