

FORSCHUNGSKOLLOQUIUM ZUR WISSENSCHAFTSGESCHICHTE

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Printing Lines and Letters: How Structural Formulae Became the Standard Notation of Organic Chemistry

Ubiquitous in chemistry today, structural formulae constitute one of the cornerstones of modern chemistry. Consisting mainly of lines, letters, and numerals, such diagrams are easily recognised by scientists and laymen alike. Yet despite their pivotal role in the history of chemistry, the making of structural formulae is still poorly understood. Why do these line-and-letter formulae look the way they do? And how did the diagrams become the standard notation of organic chemistry? I approach these questions from a communication-centred perspective that integrates the history of chemistry with the history of education and print culture to analyse the circulation of chemical knowledge across national borders and scientific communities.

By following this approach, I will illustrate that the establishment of the new chemical notation depended on the complex interaction of such factors as the function of print media in education, typographical constraints, and the active role of authors, teachers, editors, publishers, printers, and readers in shaping national and international markets for scientific print. In doing this, I demonstrate that chemical representations, as well as the means by which they were communicated, must not be understood as being secondary to chemical theories or laboratory work, but were in fact situated in the very midst of the knowledge-making process.

Dr. Konstantin S. Kiprijanov is a teaching fellow and research assistant at the Centre for the History and Philosophy of Science, University of Leeds. His research focuses on the history and philosophy of chemistry, broadly construed. Konstantin also has strong research interests in the epistemology of visual representations, Soviet science, and the role of communication practices in the making of scientific knowledge.

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