

Search & Browse

- [Simple Search](#)
- [Advanced Search](#)
- [Browse by Subject](#)
- [Browse by Year](#)
- [Browse by Conferences/Volumes](#)
- [Latest Additions](#)

Information

- [Home](#)
- [About the Archive](#)
- [Archive Policy](#)
- [History](#)
- [Help](#)
- [FAQ](#)
- [Journal Eprint Policies](#)
- [Register](#)
- [Contact Us](#)

News

[Guide to new PhilSci-Archive features.](#)

Patching Physics and Chemistry Together

Bishop, Robert (2004) *Patching Physics and Chemistry Together*. In: [\[2004\] Philosophy of Science Assoc. 19th Biennial Meeting - PSA2004: Contributed Papers \(Austin, TX: 2004\) > PSA 2004 Contributed Papers](#). (Unpublished)



PDF
[Download \(32Kb\)](#) | [Preview](#)

Abstract

The "usual story" regarding molecular chemistry is that it is roughly an application of quantum mechanics. That is to say, quantum mechanics supplies everything necessary and sufficient, both ontologically and epistemologically to reduce molecular chemistry to quantum mechanics. This is a reductive story, to be sure, but a key explanatory element of molecular chemistry, namely molecular structure, is absent from the quantum realm. On the other hand, typical characterizations of emergence, such as the unpredictability or inexplicability of molecular structure based on quantum mechanics do not characterize the relationship between molecular chemistry and quantum mechanics well either. A different scheme for characterizing reduction and emergence is proposed that accommodates the relationship between quantum mechanics and molecular chemistry and some initial objections to the scheme are considered.

Export/Citation: [EndNote](#) | [BibTeX](#) | [Dublin Core](#) | [ASCII \(Chicago style\)](#) | [HTML Citation](#) | [OpenURL](#)
Social Networking: [Share](#) |

Item Type: Conference or Workshop Item (UNSPECIFIED)

Keywords: Context, Reduction, Emergence, Chemistry, Quantum Mechanics

Subjects: [Specific Sciences > Chemistry](#)
[General Issues > Philosophers of Science](#)
[Specific Sciences > Physics > Quantum Mechanics](#)

Conferences and Volumes: [\[2004\] Philosophy of Science Assoc. 19th Biennial Meeting - PSA2004: Contributed Papers \(Austin, TX: 2004\) > PSA 2004 Contributed Papers](#)

Depositing User: [Robert C. Bishop](#)

Date Deposited: 16 Aug 2004

Last Modified: 07 Oct 2010 11:12

Item ID: 1880

Public Domain: No

Conference Date: 18-20 November 2004

Conference Location: Austin, Texas

URI: <http://philsci-archive.pitt.edu/id/eprint/1880>

Actions (login required)



[View Item](#)

Document Downloads



This site is hosted by the [University Library System](#) of the [University of Pittsburgh](#) as part of its [D-Scribe Digital Publishing Program](#)

Philsci Archive is powered by [EPrints 3](#) which is developed by the [School of Electronics and Computer Science](#) at the University of Southampton. [More information and software credits.](#)

