

Events

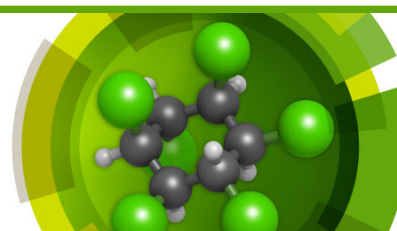
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Halogen Bonding in Supramolecular and Solid State Chemistry

Faraday Discussion



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Halogen Bonding in Supramolecular and Solid State Chemistry - Faraday Discussion

10 - 12 July 2017, Ottawa, Canada 

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Introduction

Halogen bonding is a topic which continues to gain increased international attention across the chemical, biochemical, and materials sciences - this non-covalent interaction receiving a formal IUPAC definition only recently. The halogen bond may be considered as a special case of sigma-hole bonding, wherein an electron donor interacts with the electrophilic region of a halogen atom. Within this broader picture, sigma-hole bonding can encompass a range of non-covalent interactions which are named after the atom bearing the electrophilic region, also known as the sigma-hole. Chalcogen bonds and pnictogen bonds have been studied both theoretically and in the solid state, for example. Most recently, the carbon bond has received attention as a special type of tetrel bond. However, the concept of sigma-hole bonding is clearly poised to take on a broader importance to a wide range of researchers and this Faraday Discussion will unite experimentalists and theoreticians who are pushing the applicability of this broad class of interactions far beyond only the halogens.

Format

The Faraday Division have been organising high impact Faraday Discussions in rapidly developing areas of physical chemistry and its interfaces with other scientific disciplines for over 100 years.

Faraday Discussions have a special format where research papers written by the speakers are distributed to all participants before the meeting, and most of the meeting is devoted to discussing the papers. Everyone contributes to the discussion - including presenting their own relevant research. The research papers and a record of the discussion are published in the journal *Faraday Discussions*.

Find out more about Faraday Discussions in this video:

Themes

- Computational approaches and sigma-hole interactions

Computational chemistry plays a significant role in understanding and classifying halogen bonds and other sigma-hole interactions. This session will cover theoretical concepts and computational results relating to sigma-hole interactions.

- Beyond the halogen bond

The halogen bond is the most prominent of the more general class of interactions involving sigma-holes. This session will focus on other sigma-hole interactions including e.g., chalcogen bonding, pnictogen bonding, and tetrel bonding.

- The halogen bond in solution

This session will cover the properties and applications of halogen bonds and other sigma-hole interactions in solution. The scope includes e.g., thermodynamic and kinetic studies, supramolecular chemistry, and recognition processes.

- Solid-state chemistry and applications

This session will cover applications of sigma-hole bonds in the solid state as well as experimental studies involving diffraction techniques and solid-state synthesis.

Aims







The aim of this discussion meeting is to bring together scientists working in the fields of halogen bonding, chalcogen bonding, pnictogen bonding, and tetrel bonding, to develop fundamental understanding of key aspects of non-covalent interactions in solid-state materials, in solution chemistry, in biochemistry, and in the gas phase.

Useful links



E-Issue now online!

Downloads

-  [Draft Programme](#)
-  [Pre-Prints Session 1a](#)
-  [Pre-Prints Session 1b](#)
-  [Pre-Prints Session 2](#)
-  [Pre-Prints Session 3](#)
-  [Pre-Prints Session 4](#)

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[Accommodation](#) 

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Related events



The 2nd International Conference on Mathematics, Science, and Computer Science

24 October 2018 07:30-18:00, Balikpapan City, East Kalimantan, Indonesia



11th International Vanadium Symposium

5 - 8 November 2018, Montevideo, Uruguay



ArmChemFront 2018

21 - 25 October 2018, Yerevan, Armenia



1st Annual Congress on Research in Applied Sciences; Engineering, Science & Technology (EST Congress-I)

16 November 2018 08:00 - 18 November 2018 18:00, Kuala Lumpur, Malaysia

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