

HIGHLIGHTS FROM THE PHYSICAL AND BIOPHYSICAL CHEMISTRY DIVISION

Who we are*

Division President

- Pierangelo Metrangolo

Vice President

- Frances Separovic

Past President

- Tim Wallington

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- Attila G. Császár

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- Lynda C. Ngozi-Olehi
- Renata Orinakova
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- Miroslav Štěpánek

Objectives

The Objectives of the Physical and Biophysical Chemistry Division (Division I) are to promote international collaboration between scientists in physical and biophysical chemistry and related fields in order to:

- Recognize new developments in physical and biophysical chemistry and its fields of applications;
- Promote future oriented activities in physical and biophysical chemistry important for the needs of the world community;
- Encourage the compilation and documentation of critically evaluated physical and biophysical chemical data;
- Address problems and formulate recommendations on terminology, symbols, units and conventions in physical and biophysical chemistry, disseminate the recommendations, encourage their translation as well as monitor their acceptance by the chemical community;
- Establish and stimulate the use of methodologies, standards and reference materials in physical and biophysical chemistry.

* Biennium 2022/2023

Subcommittees and Commissions of Division I

Division I is also articulated or involved in:

- Commission on Physicochemical Symbols, Terminology, and Units ([Commission I.1](#))
- Division I [Advisory Subcommittee](#)
- Interdivisional Subcommittee on Materials Chemistry ([ISMC](#)), together with the [Inorganic Chemistry Division](#) and the [Polymer Division](#)
- Interdivisional Subcommittee on Critical Evaluation of Data ([ISCED](#)), together with the [Analytical Chemistry Division](#) and the [Polymer Division](#)
- Interdivisional Committee on Green Chemistry for Sustainable Development ([ICGCSD](#))

Examples of successful projects

Pure Appl. Chem., Vol. 83, No. 8, pp. 1637–1641, 2011.
doi:10.1351/PAC-REC-10-01-02
© 2011 IUPAC, Publication date (Web): 8 July 2011

Definition of the hydrogen bond
(IUPAC Recommendations 2011)*

Elangannan Arunan^{1,‡}, Gautam R. Desiraju², Roger A. Klein³, Joanna Sadlej⁴, Steve Scheiner⁵, Ibon Alkorta⁶, David C. Clary⁷, Robert H. Crabtree⁸, Joseph J. Dannenberg⁹, Pavel Hobza¹⁰, Henrik G. Kjaergaard¹¹, Anthony C. Legon¹², Benedetta Mennucci¹³, and David J. Nesbitt¹⁴

Pure Appl. Chem., Vol. 85, No. 8, pp. 1711–1713, 2013.
http://dx.doi.org/10.1351/PAC-REC-12-05-10
© 2013 IUPAC, Publication date (Web): 10 July 2013

Definition of the halogen bond
(IUPAC Recommendations 2013)*

Gautam R. Desiraju¹, P. Shing Ho², Lars Kloos³, Anthony C. Legon⁴, Roberto Marquardt⁵, Pierangelo Metrangolo^{6,‡}, Peter Politzer⁷, Giuseppe Resnati^{6,‡}, and Kari Rissanen⁸

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Pure Appl. Chem. 2015; 87(9-10): 1051–1069

IUPAC Technical Report

Matthias Thommes*, Katsumi Kaneko, Alexander V. Neimark, James P. Olivier, Francisco Rodríguez-Reinoso, Jean Rouquerol and Kenneth S. W. Sing

Physisorption of gases, with special reference to the evaluation of surface area and pore size distribution (IUPAC Technical Report)

Documents	Citations	<2019	2019	2020	2021	2022	2023	Subtotal	>2023	Total
Top cited PAC articles:	Total	23454	5248	6012	6986	7108	4315	29669	2	53125
1	Physisorption of gases, with special reference to the evalua...	2015	1550	1244	1706	1968	2236	1525	8679	10229
2	Standards for photoluminescence quantum yield measurements i...	2011	681	178	192	156	194	116	836	1517
3	Definition of the halogen bond (IUPAC recommendations 2013)	2013	599	161	180	212	155	80	788	1387
4	Definition of the hydrogen bond (IUPAC Recommendations 2011)	2011	682	150	115	111	152	84	612	1294
5	Terminology of metal-organic frameworks and coordination pol...	2013	315	95	121	125	160	73	574	889
6	Defining the hydrogen bond: An account (IUPAC Technical Repo...	2011	497	74	76	77	57	25	309	806
7	Isotopic compositions of the elements 2009 (IUPAC technical ...	2011	469	56	64	43	47	18	228	697
8	Terminology for biorelated polymers and applications (IUPAC ...	2012	194	71	86	129	129	74	489	683
9	Polyaniline: The infrared spectroscopy of conducting polymer...	2011	248	50	55	55	45	18	223	471
10	Atomic weights of the elements 2013 (IUPAC Technical Report)	2016	117	71	81	84	76	39	351	468

Contacts

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President 2024/2025:

Frances Separovic fs@unimelb.edu.au

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The Green Book

A major activity of the Division and [Commission I.1](#) is to produce, review, and maintain the so-called Green Book "[Quantities, Units and Symbols in Physical Chemistry](#)". This book provides a readable compilation of widely used terms and symbols from many sources together with brief understandable definitions. Full text pdf with bookmark by chapters and sections is available. Printing of the 4th edition is under preparation by the Royal Society of Chemistry (RSC).

