

# Institute of Inorganic Chemistry of the CAS, v. v. i.

## ASEP Publications

**Document Type:** Impacted Journal Article, Journal Article, Monograph, Monograph Chapter, Proceedings Paper (International conf.), Proceedings Paper (Czech conf.)

**Year(s):** 2020, 2019

**Database:** ASEP

0523886 - ÚACH 2021 RIV DE eng J - Journal Article

**Assaf, K. I. - Holub, Josef - Bernhardt, E. - Oliva-Enrich, J. M. - Fernández Pérez, M. I. - Canle, M. - Santaballa, J.A. - Fanfrlík, Jindřich - Hnyk, Drahomír - Nau, W. M.**

Face-Fusion of Icosahedral Boron Hydride Increases Affinity to  $\gamma$ -Cyclodextrin: closo,closo-[B<sub>21</sub>H<sub>18</sub>]<sup>-</sup> as an Anion with Very Low Free Energy of Dehydration.

*ChemPhysChem*. Roč. 21, č. 10 (2020), s. 971-976. ISSN 1439-4235

**R&D Projects:** GA ČR(CZ) GA17-08045S

**Institutional Support:** RVO:61388980 ; RVO:61388963

**Keywords:** anion binding \* boron clusters \* desolvation \* host-guest chemistry \* intermolecular interactions

Subject RIV: CA - Inorganic Chemistry; CC - Organic Chemistry

Obor OECD: Inorganic and nuclear chemistry; Organic chemistry (UOCHB-X)

**Impact factor:** 3.077, year: 2018

<http://hdl.handle.net/11104/0308793>

Assaf, K. I. Fanfrlík, Jindřich

- Hnyk, Drahomír

- Nau, W. M.

Permanent link: <http://hdl.handle.net/11104/0308793>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Inst. Repository](#)

0507776 - ÚACH 2020 RIV US eng J - Journal Article

**Assaf, K. I. - Begaj, B. - Frank, A. - Nilam, M. - Mougharbel, A. S. - Kortz, U. - Nekvinda, Jan - Grüner, Bohumír - Gabel, D. - Nau, W. M.**

High-affinity binding of metallocarborane cobalt bis(dicarbollide) anions to cyclodextrins and application to membrane translocation.

*Journal of Organic Chemistry*. Roč. 84, č. 18 (2019), s. 11790-11798. ISSN 0022-3263

AV ČR(CZ) DAAD-17-22

Bilaterální spolupráce

**Institutional Support:** RVO:61388980

**Keywords:** closo-dodecaborate \* gamma-cyclodextrin \* boron clusters

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 4.745, year: 2018

<https://pubs.acs.org/doi/abs/10.1021/acs.joc.9b01688>

Nau, W. M.

Permanent link: <http://hdl.handle.net/11104/0299746>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)

0524737 - ÚACH 2021 RIV CH eng J - Journal Article

**Bakardjieva, Snežana - Horák, Pavel - Vacík, Jiří - Cannavó, Antonino - Lavrentiev, Vasyl - Torrisi, Alfio - Michalcová, A. - Klie, R. - Rui, X. - Calcagno, L. - Němeček, J. - Ceccio, Giovanni**

Effect of Ar<sup>+</sup> irradiation of Ti<sub>3</sub>InC<sub>2</sub> at different ion beam fluences.

*Surface and Coatings Technology*. Roč. 394, JUL (2020), č. článku 125834. ISSN 0257-8972

**R&D Projects:** GA MŠK(CZ) LTAUSA17128

**Institutional Support:** RVO:61388980 ; RVO:61389005

**Keywords:** Ion irradiation \* MAX phases \* Microstructure \* Nanoindentation \* Thin films \* Ti<sub>3</sub>InC<sub>2</sub>

Subject RIV: CA - Inorganic Chemistry; BM - Solid Matter Physics & Magnetism

Obor OECD: Inorganic and nuclear chemistry; Condensed matter physics (including formerly solid state physics, supercond.) (UJF-V)

**Impact factor:** 3.192, year: 2018

<https://www.sciencedirect.com/science/article/pii/S025789722030503X?via%3Dihub>

Bakardjieva, Snejana Ceccio, Giovanni  
Permanent link: <http://hdl.handle.net/11104/0309040>

- [SCOPUS](#)
- [DOI](#)

0503773 - ÚACH 2020 RIV NL eng J - Journal Article

**Bakardjieva, Snejana - Fajgar, Radek - Jakubec, Ivo - Kočí, Eva - Zhigunov, Alexander - Chatzisyneon, E. - Davididou, K.**  
Photocatalytic degradation of bisphenol A induced by dense nanocavities inside aligned 2D-TiO<sub>2</sub> nanostructures.

*Catalysis Today*. Roč. 328, SI (2019), s. 189-201. ISSN 0920-5861.

[European meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA) /10./, Almería, 04.06.2018-08.06.2018]

**R&D Projects:** GA ČR(CZ) GA18-15613S

**Institutional Support:** RVO:61388980 ; RVO:67985858 ; RVO:61389013

**Keywords:** Freeze-drying \* Anatase TiO<sub>2</sub> \* Nanocavities \* Photocatalysis \* Emerging pollutants

Subject RIV: CA - Inorganic Chemistry; CA - Inorganic Chemistry; CD - Macromolecular Chemistry

Obor OECD: Inorganic and nuclear chemistry; Inorganic and nuclear chemistry (UCHP-M); Polymer science (UMCH-V)

**Impact factor:** 4.888, year: 2018

<http://hdl.handle.net/11104/0295554>

Bakardjieva, Snejana

Permanent link: <http://hdl.handle.net/11104/0295554>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)
- [Inst. Repository](#)

0507778 - ÚACH 2020 RIV GB eng J - Journal Article

**Bakardjieva, Snejana - Mareš, Jakub - Fajgar, Radek - Zenou, V. Y. - Malečková, M. - Chatzisyneon, E. - Bíbová-Lipšová, Hana - Jirkovský, Jaromír**

The relationship between microstructure and photocatalytic behavior in lanthanum-modified 2D TiO<sub>2</sub> nanosheets upon annealing of a freeze-cast precursor.

*RSC Advances*. Roč. 9, č. 40 (2019), s. 22988-23003. ISSN 2046-2069

**R&D Projects:** GA ČR(CZ) GA18-15613S; GA MŠk(CZ) LM2015073

**Institutional Support:** RVO:61388980 ; RVO:67985858 ; RVO:61388955

**Keywords:** lyophilized aqueous colloids \* lattice distortion \* salicylic-acid \* degradation \* titania \* 4-chlorophenol

Subject RIV: CA - Inorganic Chemistry; CA - Inorganic Chemistry; CF - Physical & Theoretical Chemistry

Obor OECD: Inorganic and nuclear chemistry; Inorganic and nuclear chemistry (UCHP-M); Physical chemistry (UFCH-W)

**Impact factor:** 3.049, year: 2018

<http://hdl.handle.net/11104/0298752>

Bakardjieva, Snejana

Permanent link: <http://hdl.handle.net/11104/0298752>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)
- [Inst. Repository](#)

0523804 - ÚACH 2021 RIV CH eng J - Journal Article

**Bakardjiev, Mario - El Anwar, Suzan - Bavoľ, Dmytro - Růžičková, Z. - Grüner, Bohumír**

Focus on Chemistry of the 10-Dioxane-nido-7,8-dicarba-undecahydro Undecaborate Zwitterion, Exceptionally Easy Abstraction of Hydrogen Bridge and Double-Action Pathways Observed in Ring Cleavage Reactions with OH<sup>-</sup> as Nucleophile.

*Molecules*. Roč. 25, č. 4 (2020), č. článku 814. ISSN 1420-3049

**R&D Projects:** GA ČR(CZ) GA18-27648S; GA AV ČR(CZ) L200321851

**Institutional Support:** RVO:61388980

**Keywords:** borane \* carborane \* dicarbollide ion \* oxonium atom \* nucleophilic substitution

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 3.060, year: 2018

<http://hdl.handle.net/11104/0308097>

Grüner, Bohumír

Permanent link: <http://hdl.handle.net/11104/0308097>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Inst. Repository](#)

0502083 - ÚACH 2020 RIV US eng J - Journal Article

**Bakardjiev, Mario - Růžicka, A. - Růžicková, Z. - Tok, Oleg L. - Holub, Josef - Hnyk, Drahomír - Fanfrlík, Jindřich - Štíbr, Bohumil**

Synthesis of closo-1,2-H<sub>2</sub>C<sub>2</sub>B<sub>8</sub>Me<sub>8</sub> and 1,2-H<sub>2</sub>C<sub>2</sub>B<sub>8</sub>Me<sub>7</sub>X (X = I and OTf) Dicarboranes and Their Rearrangement Reactions.

*Inorganic Chemistry*. Roč. 58, č. 4 (2019), s. 2865-2871. ISSN 0020-1669

**R&D Projects:** GA ČR(CZ) GA16-01618S

**Institutional Support:** RVO:61388980 ; RVO:61388963

**Keywords:** dicarboranes

Subject RIV: CA - Inorganic Chemistry; CF - Physical & Theoretical Chemistry

Obor OECD: Inorganic and nuclear chemistry; Physical chemistry (UOCHB-X)

**Impact factor:** 4.850, year: 2018

<https://pubs.acs.org/doi/10.1021/acs.inorgchem.8b03550>

Štíbr, Bohumil

Permanent link: <http://hdl.handle.net/11104/0294031>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)

0507907 - FZÚ 2020 RIV GB eng J - Journal Article

**Bárta, Jan - Müllerová, E. - Kuzár, M. - Procházková, Lenka - Kučerková, Romana - Jakubec, Ivo - Čuba, V.**

Photochemical synthesis and characterization of multi-component (Gd, Lu)<sub>3</sub>(Ga,Al)<sub>3</sub>O<sub>12</sub>: Ce garnet powders.

*Radiation Measurements*. Roč. 124, May (2019), s. 98-102. ISSN 1350-4487

**R&D Projects:** GA ČR GA17-06479S

**Institutional Support:** RVO:68378271 ; RVO:61388980

**Keywords:** garnet \* synthesis \* nanomaterial \* X-ray diffraction \* radioluminescence

Subject RIV: CH - Nuclear & Quantum Chemistry; CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry; Inorganic and nuclear chemistry (UACH-T)

**Impact factor:** 1.435, year: 2018

<https://doi.org/10.1016/j.radmeas.2019.03.012>

Bárta, Jan

Permanent link: <http://hdl.handle.net/11104/0298869>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)

0500942 - ÚACH 2020 RIV DE eng J - Journal Article

**Baše, Tomáš - Holub, Josef - Fanfrlík, Jindřich - Hnyk, Drahomír - Lane, P. D. - Wann, D. A. - Vishnevskiy, Y. V. - Tikhonov, D. S. - Reuter, C. G. - Mitzel, N. W.**

Icosahedral Carboranes with Peripheral Hydrogen-Chalcogenide Groups: Structures from Gas Electron Diffraction and Chemical Shielding in Solution.

*Chemistry - A European Journal*. Roč. 25, č. 9 (2019), s. 2313-2321. ISSN 0947-6539

**R&D Projects:** GA ČR(CZ) GA17-08045S

**Institutional Support:** RVO:61388980 ; RVO:61388963

**Keywords:** ab initio calculations \* carboranes \* electron diffraction \* selenols \* thiols

Subject RIV: CA - Inorganic Chemistry; CF - Physical & Theoretical Chemistry

Obor OECD: Inorganic and nuclear chemistry; Physical chemistry (UOCHB-X)

**Impact factor:** 5.160, year: 2018

<https://onlinelibrary.wiley.com/doi/full/10.1002/chem.201805145>

Hnyk, Drahomír

- Vishnevskiy, Y. V.

- Mitzel, N. W.

Permanent link: <http://hdl.handle.net/11104/0295231>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)

0523103 - ÚACH 2021 RIV DE eng J - Journal Article

**Beckett, M. A. - Brellochs, B. - Chizhevsky, I. T. - Damhus, T. - Hellwich, K. H. - Kennedy, John David - Laitinen, R. - Powell, W. H. - Rabinovich, D. - Vinas, C. - Yerin, A.**

Nomenclature for boranes and related species (IUPAC Recommendations 2019).

*Pure and Applied Chemistry*. Roč. 92, č. 2 (2020), s. 355-381. ISSN 0033-4545

International Union of Pure and Applied Chemistry(US) 2012-045-1-800

**Institutional Support:** RVO:61388980

**Keywords:** molecular-structure \* macropolyhedral metallaboranes \* cluster compounds \* boron hydrides \* carbaboranes \* heteroboranes \* metallaboranes \* IUPAC Chemical Nomenclature and Structural Representation Division

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 2.350, year: 2018

<http://hdl.handle.net/11104/0307508>

Beckett, M. A.

Permanent link: <http://hdl.handle.net/11104/0307508>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Inst. Repository](#)

0505101 - ÚMCH 2020 RIV CH eng J - Journal Article

**Beneš, Hynek - Kredatusová, Jana - Peter, Jakub - Livi, S. - Bujok, Sonia - Pavlova, Ewa - Hodan, Jiří - Abbrent, Sabina - Konefal, Magdalena - Ecorchard, Petra**

Ionic liquids as delaminating agents of layered double hydroxide during in-situ synthesis of poly (butylene adipate-co-terephthalate) nanocomposites.

*Nanomaterials*. Roč. 9, č. 4 (2019), s. 1-16, č. článku 618. ISSN 2079-4991

**R&D Projects:** GA ČR(CZ) GA17-08273S; GA MŠk(CZ) LO1507

**Institutional Support:** RVO:61389013 ; RVO:61388980

**Keywords:** poly (butylene adipate-co-terephthalate) \* ionic liquid \* layered double hydroxide

Subject RIV: CD - Macromolecular Chemistry; CA - Inorganic Chemistry

Obor OECD: Polymer science; Inorganic and nuclear chemistry (UACH-T)

**Impact factor:** 4.034, year: 2018

<https://www.mdpi.com/2079-4991/9/4/618/pdf>

Beneš, Hynek

Permanent link: <http://hdl.handle.net/11104/0296618>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)

0506307 - ÚACH 2020 RIV US eng J - Journal Article

**Boldog, I. - Reiss, G. - Domasevitch, K.V. - Baše, Tomáš - Bräse, S.**

When does a supramolecular synthon fail? Comparison of bridgehead-functionalized adamantanes: the tri- and tetra- amides and amine hydrochlorides.

*Crystal Growth & Design*. Roč. 19, č. 9 (2019), s. 5218-5227. ISSN 1528-7483

**Institutional Support:** RVO:61388980

**Keywords:** adamantane \* crystal structure \* H-bond, prediction \* supramolecular synthon \* violation

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 4.153, year: 2018

<https://pubs.acs.org/doi/10.1021/acs.cgd.9b00594>

Boldog, I.

Permanent link: <http://hdl.handle.net/11104/0299089>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)

0523884 - ÚACH 2021 RIV US eng J - Journal Article

**Bould, Jonathan - Clegg, W. - Waddell, P. G. - Cvačka, Josef - Dušek, Michal - Londesborough, Michael Geoffrey Stephen**

A Reversible NO-Triggered Multiple Metallaborane Cluster Fusion by Ligand Expulsion/Addition from (PMe<sub>2</sub>Ph)<sub>4</sub>Pt<sub>2</sub>B<sub>10</sub>H<sub>10</sub> to Afford (PMe<sub>2</sub>Ph)<sub>8</sub>Pt<sub>8</sub>B<sub>40</sub>H<sub>40</sub> and (PMe<sub>2</sub>Ph)<sub>5</sub>Pt<sub>4</sub>B<sub>20</sub>H<sub>20</sub>.

*Inorganic Chemistry*. Roč. 59, č. 7 (2020), s. 5030-5040. ISSN 0020-1669

**R&D Projects:** GA ČR(CZ) GA18-20286S; GA ČR(CZ) GA18-10504S; GA MŠk(CZ) LO1603

GRANT EU: European Commission(CZ) CZ.2.16/3.1.00/24510

AV ČR(CZ) StrategieAV21/10

StrategieAV

**Institutional Support:** RVO:61388980 ; RVO:61388963 ; RVO:68378271

**Keywords:** Hydrogen \* Platinum \* Ligands \* Metal clusters

Subject RIV: CA - Inorganic Chemistry; CC - Organic Chemistry; CF - Physical & Theoretical Chemistry

Obor OECD: Inorganic and nuclear chemistry; Organic chemistry (UOCHB-X); Physical chemistry (FZU-D)

**Impact factor:** 4.850, year: 2018

<https://pubs.acs.org/doi/abs/10.1021/acs.inorgchem.0c00247>

Bould, Jonathan

Permanent link: <http://hdl.handle.net/11104/0308643>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)

0523735 - ÚACH 2021 RIV KR eng J - Journal Article

**Burkeyev, M. Z. - Kovaleval, A. K. - Burkeyeva, G. K. - Tazhbayev, E. M. - Plocek, Jiří**

Polypropylene Glycol Maleate Phthalate Terpolymerization with Acrylamide and Acrylic Acid.

*Polymer-Korea*. Roč. 44, č. 2 (2020), s. 123-131. ISSN 0379-153X

**Institutional Support:** RVO:61388980

**Keywords:** hydrogels \* terpolymerization \* unsaturated polyester \* polypropylene glycol maleate phthalate \* acrylic acid \* acrylamide

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 0.500, year: 2018

[http://www.dbpia.co.kr/journal/articleDetail?nodeId=NODE09314410&language=ko\\_KR](http://www.dbpia.co.kr/journal/articleDetail?nodeId=NODE09314410&language=ko_KR)

Kovaleval, A. K.

Permanent link: <http://hdl.handle.net/11104/0308035>

- [WOS](#)
- [DOI](#)

0495728 - ÚACH 2019 RIV NL eng J - Journal Article

**Buršík, Josef - Uhrecký, Róbert - Soroka, Miroslav - Kužel, R. - Prokleška, J.**

The hexaferrite Sr<sub>3</sub>Co<sub>2</sub>Fe<sub>24</sub>O<sub>41</sub> thin films by chemical solution deposition method: Synthesis and characterization.

*Journal of Magnetism and Magnetic Materials*. Roč. 469, 1 JAN (2019), s. 245-252. ISSN 0304-8853

**R&D Projects:** GA ČR(CZ) GA14-18392S; GA MŠk(CZ) LM2015073

**Institutional Support:** RVO:61388980

**Keywords:** Hexaferrites \* Sr<sub>3</sub>Co<sub>2</sub>Fe<sub>24</sub>O<sub>41</sub> \* Thin films \* Chemical solution deposition

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 2.683, year: 2018

Buršík, Josef

Permanent link: <http://hdl.handle.net/11104/0291149>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)

0524270 - ÚACH 2021 RIV US eng J - Journal Article

**Bůžek, Daniel - Ondrušová, Soňa - Hynek, Jan - Kovář, P. - Lang, Kamil - Rohlíček, Jan - Demel, Jan**

Robust Aluminum and Iron Phosphinate Metal-Organic Frameworks for Efficient Removal of Bisphenol A.

*Inorganic Chemistry*. Roč. 59, č. 8 (2020), s. 5538-5545. ISSN 0020-1669

**R&D Projects:** GA ČR(CZ) GA20-04408S; GA TA ČR(CZ) TG02010049; GA MŠk(CZ) LM2018124

OP VVV - SOLID21(XE) CZ.02.1.01/0.0/0.0/16\_019/0000760

**Institutional Support:** RVO:61388980 ; RVO:68378271

**Keywords:** stability \* chemicals \* design

Subject RIV: CA - Inorganic Chemistry; CF - Physical & Theoretical Chemistry

Obor OECD: Inorganic and nuclear chemistry; Atomic, molecular and chemical physics (physics of atoms and molecules including collision, interaction with radiation, magnetic resonances, Mössbauer effect) (FZU-D)

**Impact factor:** 4.850, year: 2018

<https://pubs.acs.org/doi/10.1021/acs.inorgchem.0c00201>

Demel, Jan

Permanent link: <http://hdl.handle.net/11104/0308818>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)

0523943 - ÚACH 2021 RIV NL eng J - Journal Article

**Cara, C. - Mamelí, V. - Rombi, E. - Pinna, N. - Angotzi, M. S. - Nižňanský, Daniel - Musinu, A. - Cannas, C.**

Anchoring ultrasmall FeIII-based nanoparticles on silica and titania mesostructures for syngas H<sub>2</sub>S purification.

*Microporous and Mesoporous Materials*. Roč. 298, MAY (2020), č. článku 110062. ISSN 1387-1811

**Institutional Support:** RVO:61388980

**Keywords:** H<sub>2</sub>S \* Iron oxide \* Mesostructured material \* Sorbent \* Ultrasmall nanoparticles

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 4.182, year: 2018

<https://www.sciencedirect.com/science/article/pii/S1387181120300652?via%3Dihub#ack0010>

Cannas, C.

Permanent link: <http://hdl.handle.net/11104/0308250>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)

0495324 - ÚACH 2019 RIV US eng J - Journal Article

**Dolanský, J. - Demel, Jan - Mosinger, Jiří**

Multifunctional polystyrene nanofiber membrane with bounded polyethyleneimine and NO photodonor: dark- and light-induced antibacterial effect and enhanced CO<sub>2</sub> adsorption.

*Journal of Materials Science*. Roč. 54, č. 3 (2019), s. 2740-2753. ISSN 0022-2461

**R&D Projects:** GA ČR(CZ) GA16-15020S

**Institutional Support:** RVO:61388980

**Keywords:** Carbon dioxide therapy \* Nitric-oxide release \* ambient air

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 3.442, year: 2018

Mosinger, Jiří

Permanent link: <http://hdl.handle.net/11104/0291150>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)
- [Inst. Repository](#)

0509885 - ÚACH 2020 RIV GB eng J - Journal Article

**Ederer, J. - Šťastný, Martin - Došek, M. - Henych, Jiří - Janoš, P.**

Mesoporous cerium oxide for fast degradation of aryl organophosphate flame retardant triphenyl phosphate.

*RSC Advances*. Roč. 9, č. 55 (2019), s. 32058-32065. ISSN 2046-2069

**R&D Projects:** GA ČR(CZ) GA19-07460S

**Institutional Support:** RVO:61388980

**Keywords:** cerium oxide \* biodegradation \* calcination \* dioxide

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 3.049, year: 2018

<http://hdl.handle.net/11104/0300548>

Ederer, J.

Permanent link: <http://hdl.handle.net/11104/0300548>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)
- [Inst. Repository](#)

0511495 - ÚACH 2020 RIV GB eng J - Journal Article

**El Anwar, Suzan - Assaf, K. I. - Begaj, B. - Samsonov, M. A. - Růžičková, Z. - Holub, Josef - Baval, Dmytro - Nau, W. M. - Gabel, D. - Grüner, Bohumír**

Versatile, one-pot introduction of nonahalogenated 2-ammonio-decaborate ions as boron cluster scaffolds into organic molecules, host-guest complexation with  $\gamma$ -cyclodextrin.

*Chemical Communications*. Roč. 55, č. 91 (2019), s. 13669-13672. ISSN 1359-7345

**R&D Projects:** GA ČR(CZ) GA19-04630S

AV ČR(CZ) DAAD-17-22

Bilaterální spolupráce

**Institutional Support:** RVO:61388980

**Keywords:** closo-decaborane anion \* carboranes \* coordinating anions

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 6.164, year: 2018

<https://pubs.rsc.org/en/content/articlelanding/2019/CC/C9CC07678F#idivAbstract>

Grüner, Bohumír

Permanent link: <http://hdl.handle.net/11104/0301747>

- [SCOPUS](#)
- [WOS](#)

- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)

0501494 - ÚACH 2020 RIV US eng J - Journal Article

**Ettler, V. - Cihlová, M. - Jarošíková, A. - Mihaljevič, M. - Drahota, P. - Kříbek, B. - Vaněk, A. - Penížek, V. - Šráček, O. - Klementová, Mariana - Engel, Z. - Kamona, F. - Mapani, B.**

Oral bioaccessibility of metal(loid)s in dust materials from mining areas of northern Namibia.

*Environment International*. Roč. 124, MAR (2019), s. 205-215. ISSN 0160-4120

**Institutional Support:** RVO:61388980

**Keywords:** potentially toxic elements \* lead-zinc mine \* human exposure \* Dust mineralogy \* Bioaccessibility \* Metal(loid)s \* Namibia \* Mining \* Smelting

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 7.943, year: 2018

<http://hdl.handle.net/11104/0295440>

Ettler, V.

Permanent link: <http://hdl.handle.net/11104/0295440>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)
- [Inst. Repository](#)

0508876 - ÚOCHB 2020 RIV CH eng J - Journal Article

**Fanfrlík, Jindřich - Hnyk, Drahomír - Hobza, Pavel**

Chalcogen Bonding due to the Exo-Substitution of Icosahedral Dicarborane.

*Molecules*. Roč. 24, č. 14 (2019), č. článku 2657. ISSN 1420-3049

**R&D Projects:** GA ČR(CZ) GA17-08045S; GA MŠk(CZ) EF16\_019/0000729

**Institutional Support:** RVO:61388963 ; RVO:61388980

**Keywords:** sigma hole \* heteroborane \* co-crystal

Subject RIV: CF - Physical & Theoretical Chemistry; CA - Inorganic Chemistry

Obor OECD: Physical chemistry; Inorganic and nuclear chemistry (UACH-T)

**Impact factor:** 3.060, year: 2018

<https://www.mdpi.com/1420-3049/24/14/2657>

Fanfrlík, Jindřich Hnyk, Drahomír

Permanent link: <http://hdl.handle.net/11104/0299669>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)
- [Inst. Repository](#)

0523949 - BFÚ 2021 RIV GB eng J - Journal Article

**Fořt, Lukáš - Grüner, Bohumír - Šícha, Václav - Někvinďa, Jan - Vespalec, Radim - Fojta, Miroslav**

Electrochemistry of icosahedral cobalt bis(dicarbollide) ions and their carbon and boron substituted derivatives in aqueous phosphate buffers.

*Electrochimica acta*. Roč. 342, MAY 10 2020 (2020), č. článku 136112. ISSN 0013-4686

**R&D Projects:** GA ČR(CZ) GA19-04630S; GA ČR GBP206/12/G151

**Institutional Support:** RVO:68081707 ; RVO:61388980

**Keywords:** molecular-structure \* metallocarboranes \* chemistry \* complexes

Subject RIV: CG - Electrochemistry; CA - Inorganic Chemistry

Obor OECD: Electrochemistry (dry cells, batteries, fuel cells, corrosion metals, electrolysis); Inorganic and nuclear chemistry (UACH-T)

**Impact factor:** 5.383, year: 2018

<https://www.sciencedirect.com/science/article/pii/S0013468620305041?via%3Dihub>

Permanent link: <http://hdl.handle.net/11104/0308259>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)

0518623 - ÚACH 2021 RIV GB eng J - Journal Article

**Fořt, J. - Vejmelková, E. - Keppert, M. - Rovnaníková, P. - Bezdička, Petr - Černý, R.**

Alkaline activation of low-reactivity ceramics: Peculiarities induced by the precursors' dual character.

Cement and Concrete Composites. Roč. 105, JAN (2020), č. článku 103440. ISSN 0958-9465

**Institutional Support:** RVO:61388980

**Keywords:** Alkaline activation \* Composite effects \* Curing temperature \* Low-reactivity ceramics

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 5.172, year: 2018

<https://www.sciencedirect.com/science/article/pii/S0958946519312831?via%3Dihub>

Černý, R.

Permanent link: <http://hdl.handle.net/11104/0304271>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)

0509234 - ÚACH 2020 RIV US eng J - Journal Article

**Frances-Monerris, A. - Holub, Josef - Roca-Sanjuan, D. - Hnyk, Drahomír - Lang, Kamil - Oliva-Enrich, J. M.**

Photochromic System among Boron Hydrides: The Hawthorne Rearrangement.

*Journal of Physical Chemistry Letters*. Roč. 10, č. 20 (2019), s. 6202-6207. ISSN 1948-7185

**R&D Projects:** GA ČR(CZ) GA17-080455

**Institutional Support:** RVO:61388980

**Keywords:** boron hydrides \* photochromic system \* isomers

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 7.329, year: 2018

<https://pubs.acs.org/doi/10.1021/acs.jpcllett.9b02290>

Frances-Monerris, A. Roca-Sanjuan, D.

- Hnyk, Drahomír

- Oliva-Enrich, J. M.

Permanent link: <http://hdl.handle.net/11104/0300303>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)

0505702 - ÚACH 2020 RIV US eng J - Journal Article

**Galek, V. - Stoklasa, J. - Hadrava, J. - Hrbek, J. - Bezdička, Petr - Sedlářová, I.**

The Behavior of Corundum Ceramic in Molten Salt.

*Journal of Nuclear Engineering and Radiation Science*. Roč. 5, č. 3 (2019), č. článku 030905. ISSN 2332-8983

**Institutional Support:** RVO:61388980

**Keywords:** Molten materials \* Corrosion protection \* Lithium compounds

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

<https://asmedigitalcollection.asme.org/nuclearengineering/article-abstract/5/3/030905/725882/The-Behavior-of-Corundum-Ceramic-in-Molten-Salt?redirectedFrom=fulltext>

Permanent link: <http://hdl.handle.net/11104/0297118>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)

0524433 - ÚACH 2021 RIV US eng J - Journal Article

**Garrappa, Silvia - Kočí, Eva - Švarcová, Silvie - Bezdička, Petr - Hradil, David**

Initial stages of metal soaps` formation in model paints: The role of humidity.

*Microchemical Journal*. Roč. 156, JUL (2020), č. článku 104842. ISSN 0026-265X

**R&D Projects:** GA ČR(CZ) GA17-15621S

**Institutional Support:** RVO:61388980

**Keywords:** FTIR spectroscopy \* Humidity \* Metal soap \* Oil paint \* X-ray diffraction

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 3.206, year: 2018

<https://www.sciencedirect.com/science/article/pii/S0026265X19321848?via%3Dihub#sec0015>

Garrappa, Silvia

Permanent link: <http://hdl.handle.net/11104/0308795>

- [SCOPUS](#)
- [DOI](#)



0501214 - ÚACH 2020 RIV NL eng J - Journal Article

**Godoy, A. P. - Ecorchard, Petra - Beneš, Hynek - Tolasz, Jakub - Smržová, Darina - Seixas, L. - Pedrotti, J. J. - de Souza, E. A.T. - El Seoud, O. A. - Donato, R. K.**

Ultrasound exfoliation of graphite in biphasic liquid systems containing ionic liquids: A study on the conditions for obtaining large few-layers graphene. *Ultrasonics Sonochemistry*. Roč. 55, JUL (2019), s. 279-288. ISSN 1350-4177

**R&D Projects:** GA MŠK(CZ) LM2015073; GA ČR(CZ) GA17-08273S

**Institutional Support:** RVO:61388980 ; RVO:61389013

**Keywords:** Biphasic liquid system \* Cavitation-based emulsification \* Graphene \* Ionic liquids \* Liquid phase exfoliation

Subject RIV: CA - Inorganic Chemistry; CD - Macromolecular Chemistry

Obor OECD: Inorganic and nuclear chemistry; Polymer science (UMCH-V)

**Impact factor:** 7.279, year: 2018

<http://hdl.handle.net/11104/0297116>

Donato, R. K.

Permanent link: <http://hdl.handle.net/11104/0297116>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)
- [Inst. Repository](#)

0511473 - ÚACH 2020 RIV US eng J - Journal Article

**Grüner, Bohumír - Brynda, Jiří - Das, V. - Šícha, Václav - Štěpánková, J. - Někvienda, Jan - Holub, Josef - Pospíšilová, B. - Fábry, Milan - Páchl, P. - Král, Vlastimil - Kugler, M. - Mašek, V. - Medvědková, M. - Matějková, S. - Nová, A. - Lišková, B. - Gurská, S. - Džubák, P. - Hajdúch, M. - Řezáčová, Pavlína**

Metallacarborane sulfamides: Unconventional, specific, and highly selective inhibitors of carbonic anhydrase IX.

*Journal of Medicinal Chemistry*. Roč. 62, č. 21 (2019), s. 9560-9575. ISSN 0022-2623

**R&D Projects:** GA ČR(CZ) GA15-05677S; GA ČR(CZ) GA18-27648S

**Institutional Support:** RVO:61388980 ; RVO:68378050

**Keywords:** Anti-tumor agents \* Carbonic anhydrase IX \* Cobaltacarborane inhibitors \* Drug penetration \* Multicellular spheroids

Subject RIV: CA - Inorganic Chemistry; EB - Genetics & Molecular Biology

Obor OECD: Inorganic and nuclear chemistry; Medicinal chemistry (UMG-J)

**Impact factor:** 6.054, year: 2018

<https://pubs.acs.org/doi/abs/10.1021/acs.jmedchem.9b00945>

Grüner, Bohumír Hajdúch, M.

- Řezáčová, Pavlína

Permanent link: <http://hdl.handle.net/11104/0302697>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)

0505703 - ÚACH 2020 RIV US eng J - Journal Article

**Hadrava, J. - Galek, V. - Stoklasa, J. - Hrbek, I. - Kunešova, K. - Bezdička, Petr - Sedlářová, I.**

Corrosion Experiments on Ceramic Samples Within Molten Salts.

*Journal of Nuclear Engineering and Radiation Science*. Roč. 5, č. 3 (2019), č. článku 030910. ISSN 2332-8983

**Institutional Support:** RVO:61388980

**Keywords:** Ceramic materials \* Corrosion \* Flameless oxidation

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

<https://asmedigitalcollection.asme.org/nuclearengineering/article-abstract/5/3/030910/725874/Corrosion-Experiments-on-Ceramic-Samples-Within?redirectedFrom=fulltext>

Permanent link: <http://hdl.handle.net/11104/0297119>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)

0523138 - ÚACH 2021 RIV CH eng J - Journal Article

**Havránek, M. - Samsonov, M. A. - Holub, Josef - Růžičková, Z. - Drož, L. - Růžička, A. - Fanfrlík, Jindřich - Hnyk, Drahomír**

The influence of halogenated hypercarbon on crystal packing in the series of 1-Ph-2-X-1,2-dicarba-closo-dodecaboranes (X = F, Cl, Br, I).

*Molecules*. Roč. 25, č. 5 (2020), č. článku molecules25051200. ISSN 1420-3049

**R&D Projects:** GA ČR(CZ) GA19-17156S

**Institutional Support:** RVO:61388980 ; RVO:61388963

**Keywords:** Halogen bond \* Icosahedral boron cluster \* Sigma hole  
Subject RIV: CA - Inorganic Chemistry; CC - Organic Chemistry  
Obor OECD: Inorganic and nuclear chemistry; Organic chemistry (UOCHB-X)  
**Impact factor:** 3.060, year: 2018  
<http://hdl.handle.net/11104/0307530>

Havránek, M. Samsonov, M. A.  
- Holub, Josef  
- Růžičková, Z.  
- Drož, L.  
- Růžička, A.  
- Fanfrlík, Jindřich  
- Hnyk, Drahomír  
Permanent link: <http://hdl.handle.net/11104/0307530>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Inst. Repository](#)

0524410 - ÚACH 2021 RIV US eng J - Journal Article

**Henke, P. - Dolanský, Jiří - Kubát, Pavel - Mosinger, Jiří**

Multifunctional Photosensitizing and Biotinylated Polystyrene Nanofiber Membranes/Composites for Binding of Biologically Active Compounds. *ACS Applied Materials and Interfaces*. Roč. 12, č. 16 (2020), s. 18792-18802. ISSN 1944-8244

**R&D Projects:** GA ČR(CZ) GA19-09721S

**Institutional Support:** RVO:61388980 ; RVO:61388955

**Keywords:** singlet oxygen \* nanofibers \* biotin \* streptavidin \* delayed fluorescence

Subject RIV: CA - Inorganic Chemistry; CF - Physical & Theoretical Chemistry

Obor OECD: Inorganic and nuclear chemistry; Physical chemistry (UFCH-W)

**Impact factor:** 8.456, year: 2018

<https://pubs.acs.org/doi/10.1021/acsami.9b23104>

Mosinger, Jiří

Permanent link: <http://hdl.handle.net/11104/0308773>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)

0507928 - ÚACH 2020 RIV NL eng J - Journal Article

**Henych, Jiří - Stehlík, Štěpán - Mazanec, K. - Tolasz, Jakub - Čermák, J. - Rezek, B. - Mattsson, A. - Österlund, L.**

Reactive adsorption and photodegradation of soman and dimethyl methylphosphonate on TiO<sub>2</sub>/nanodiamond composites.

*Applied Catalysis B - Environmental*. Roč. 259, DEC (2019), č. článku 118097. ISSN 0926-3373

**R&D Projects:** GA ČR(CZ) GJ18-11711Y; GA MŠK(CZ) EF16\_019/0000760

AV ČR(CZ) MSM200321601; OP VVV - SOLID21(XE) CZ.02.1.01/0.0/0.0/16\_019/0000760

Program na podporu mezinárodní spolupráce začínajících výzkumných pracovníků

**Institutional Support:** RVO:61388980 ; RVO:68378271

**Keywords:** Chemical warfare agents \* Nanocomposites \* Nanodiamond \* Photocatalysis \* Titanium dioxide

Subject RIV: CA - Inorganic Chemistry; CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry; Inorganic and nuclear chemistry (FZU-D)

**Impact factor:** 14.229, year: 2018

<https://www.sciencedirect.com/science/article/pii/S0926337319308446?via%3Dihub>

Henych, Jiří

Permanent link: <http://hdl.handle.net/11104/0298892>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)

0472449 - ÚACH 2020 RIV NL eng J - Journal Article

**Henych, Jiří - Janoš, P. - Kormunda, M. - Tolasz, Jakub - Štengl, Václav**

Reactive adsorption of toxic organophosphates parathion methyl and DMMP on nanostructured Ti/Ce oxides and their composites.

*Arabian Journal of Chemistry*. Roč. 12, č. 8 (2019), s. 4258-4269. ISSN 1878-5352

**Institutional Support:** RVO:61388980

**Keywords:** Ceria \* DMMP \* Organophosphorus compounds \* Parathion methyl \* Reactive sorbent \* Titania

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 3.298, year: 2018

<https://doi.org/10.1016/j.arabjc.2016.06.002>

Henych, Jiří

Permanent link: <http://hdl.handle.net/11104/0270290>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Result - R&D](#)
- [Inst. Repository](#)

0504449 - ÚACH 2020 RIV GB eng J - Journal Article

**Henych, Jiří - Mattsson, A. - Tolasz, Jakub - Štengl, Václav - Österlund, L.**

Solar light decomposition of warfare agent simulant DMMP on TiO<sub>2</sub>/graphene oxide nanocomposites.

*Catalysis Science & Technology*. Roč. 9, č. 8 (2019), s. 1816-1824. ISSN 2044-4753

NATO(US) SPS984599; AV ČR(CZ) MSM200321601

Science for Peace and Security; Program na podporu mezinárodní spolupráce začínajících výzkumných pracovníků

**Institutional Support:** RVO:61388980

**Keywords:** dimethyl methylphosphonate \* reactive adsorption \* graphene oxide \* anatase TiO<sub>2</sub> \* organophosphorus pesticides \* trimethyl phosphate \* cerium oxide

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 5.726, year: 2018

<https://pubs.rsc.org/en/content/articlelanding/2019/CY/C9CY00059C#!divAbstract>

Henych, Jiří

Permanent link: <http://hdl.handle.net/11104/0296078>

- [SCOPUS](#)
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- [DOI](#)
- [Result - R&D](#)

0507762 - ÚOCHB 2020 RIV DE eng J - Journal Article

**Holec, Jan - Rybáček, Jiří - Vacek, Jaroslav - Karras, Manfred - Bednárová, Lucie - Buděšínský, Miloš - Slušná, Michaela - Holý, Petr - Schmidt, B. - Stará, Irena G. - Starý, Ivo**

Chirality-Controlled Self-Assembly of Amphiphilic Dibenzo[6]helicenes into Langmuir-Blodgett Thin Films.

*Chemistry - A European Journal*. Roč. 25, č. 49 (2019), s. 11494-11502. ISSN 0947-6539

**R&D Projects:** GA ČR(CZ) GA16-08294S; GA MŠk(CZ) LM2015073

**Institutional Support:** RVO:61388963 ; RVO:61388980

**Keywords:** arenes \* chirality \* helical structures \* Langmuir-Blodgett films \* self-assembly

Subject RIV: CC - Organic Chemistry; CA - Inorganic Chemistry

Obor OECD: Organic chemistry; Inorganic and nuclear chemistry (UACH-T)

**Impact factor:** 5.160, year: 2018

<https://onlinelibrary.wiley.com/doi/abs/10.1002/chem.201901695>

Schmidt, B.

- Stará, Irena G.

- Starý, Ivo

Permanent link: <http://hdl.handle.net/11104/0298734>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Result - R&D](#)

0506139 - ÚACH 2020 RIV DE eng J - Journal Article

**Holub, Josef - Vrána, J. - Růžička, A. - Růžicková, Z. - Fanfrlík, Jindřich - Hnyk, Drahomír**

Thiaboranes on Both Sides of the Icosahedral Barrier: Retaining and Breaking the Barrier with Carbon Functionalities.

*ChemPlusChem*. Roč. 84, č. 7 (2019), s. 822-827. ISSN 2192-6506

**R&D Projects:** GA ČR(CZ) GA17-08045S

**Institutional Support:** RVO:61388980 ; RVO:61388963

**Keywords:** clusters \* heats of formation \* icosahedra \* multicenter bonding \* thiaborane

Subject RIV: CA - Inorganic Chemistry; CF - Physical & Theoretical Chemistry

Obor OECD: Inorganic and nuclear chemistry; Physical chemistry (UOCHB-X)

**Impact factor:** 3.441, year: 2018

<https://onlinelibrary.wiley.com/doi/full/10.1002/cplu.201900115>

Fanfrlík, Jindřich

- Hnyk, Drahomír

Permanent link: <http://hdl.handle.net/11104/0297556>

- [SCOPUS](#)

- [WOS](#)
- [DOI](#)
- [Result - R&D](#)

0524055 - ÚJF 2021 RIV NL eng J - Journal Article

**Horák, Pavel - Bakardjieva, Snejana - Vacík, Jiří - Rui, X. - Klie, R.**

Preparation of Ti<sub>2</sub>C MXene phase by ion beam sputtering and ion irradiation.

*Nuclear Instruments & Methods in Physics Research Section B*. Roč. 469, č. 4 (2020), s. 49-51. ISSN 0168-583X

**R&D Projects:** GA ČR(CZ) GA18-21677S

**Institutional Support:** RVO:61388980 ; RVO:61389005

**Keywords:** MXenes \* Ti<sub>2</sub>C \* ion beam sputtering \* ion irradiation

Subject RIV: BG - Nuclear, Atomic and Molecular Physics, Colliders; CA - Inorganic Chemistry

Obor OECD: Nuclear physics; Inorganic and nuclear chemistry (UACH-T)

**Impact factor:** 1.210, year: 2018

<https://doi.org/10.1016/j.nimb.2020.02.010>

Horák, Pavel

Permanent link: <http://hdl.handle.net/11104/0308363>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)

0517686 - ÚJF 2020 RIV US eng C - Proceedings Paper (International conf.)

**Horák, Pavel - Bakardjieva, Snejana - Vacík, Jiří - Klie, R. - Lavrentiev, Vasyi - Němeček, J. - Plocek, Jiří - Kupčík, Jaroslav - Cannavó, Antonino - Ceccio, Giovanni**

Synthesis and modification of Ti<sub>2</sub>SnC nanolaminates with high-fluence 35 keV Ar<sup>+</sup> ions.

*AIP Conference Proceedings*. Vol. 2160. Melville: American Institute of Physics Inc., 2019, č. článku 060004. ISBN 978-0-7354-1905-6. ISSN 0094-243X. [25th International Conference on the Application of Accelerators in Research and Industry (CAARI 2018). Grapevine (US), 12.08.2018-17.08.2018]

**R&D Projects:** GA MŠK(CZ) LTAUSA17128

**Institutional Support:** RVO:61388980 ; RVO:61389005

**Keywords:** Ti<sub>2</sub>SnC \* nanocomposites

Subject RIV: BG - Nuclear, Atomic and Molecular Physics, Colliders; CA - Inorganic Chemistry

Obor OECD: Nuclear physics; Inorganic and nuclear chemistry (UACH-T)

Permanent link: <http://hdl.handle.net/11104/0302989>

- [SCOPUS](#)
- [DOI](#)
- [Result - R&D](#)

0518626 - ÚACH 2021 RIV eng J - Journal Article

**Horkavcová, D. - Rohanová, D. - Stríbný, Jiří - Schuhladen, K. - Boccaccini, A. R. - Bezdička, Petr**

Interaction of MOPS buffer with glass-ceramic scaffold: Effect of (PO<sub>4</sub>)<sup>3-</sup> ions in SBF on kinetics and morphology of formatted hydroxyapatite.

*Journal of Biomedical Materials Research. Part B*. Roč. 108, č. 5 (2020), s. 1888-1896. ISSN 1552-4973

**Institutional Support:** RVO:61388980

**Keywords:** bioglass (R) \* glass-ceramics scaffold \* in vitro test \* MOPS buffer \* simulated body fluid

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 2.674, year: 2018

<http://hdl.handle.net/11104/0308792>

Horkavcová, D.

Permanent link: <http://hdl.handle.net/11104/0308792>

- [SCOPUS](#)
- [WOS](#)
- [PUBMED](#)
- [DOI](#)
- [Inst. Repository](#)

0518621 - ÚACH 2021 RIV NL eng J - Journal Article

**Hradil, David - Hradilová, J. - Lanterna, G. - Galeotti, M. - Holcová, K. - Jaques, V. - Bezdička, Petr**

Clay and alunite-rich materials in painting grounds of prominent Italian masters - Caravaggio and Mattia Preti.

*Applied Clay Science*. Roč. 185, FEB (2020), č. článku 105412. ISSN 0169-1317

**R&D Projects:** GA ČR(CZ) GA17-25687S

**Institutional Support:** RVO:61388980

**Keywords:** Alunite \* Caravaggio \* Globigerina limestone \* Painting grounds \* Powder X-ray micro-diffraction

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 3.890, year: 2018

<https://www.sciencedirect.com/science/article/pii/S0169131719304703?via%3Dihub>

Hradil, David

Permanent link: <http://hdl.handle.net/11104/0306835>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)

0523431 - ÚACH 2021 RIV CH eng J - Journal Article

**Hradil, David - Hradilová, J. - Bezdička, Petr**

Clay minerals in european painting of the mediaeval and baroque periods.

*Minerals*. Roč. 10, č. 3 (2020), č. článku 255. ISSN 2075-163X

**R&D Projects:** GA ČR(CZ) GA17-25687S

AV ČR(CZ) StrategieAV21/6

StrategieAV

**Institutional Support:** RVO:61388980

**Keywords:** Clay-based grounds \* Earth pigments \* Gilding \* Kaolin \* Ochres \* Painting \* Pottery clay \* Powder X-ray microdiffraction \* Provenance studies

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 2.250, year: 2018

<http://hdl.handle.net/11104/0307789>

Hradil, David Hradilová, J.

- Bezdička, Petr

Permanent link: <http://hdl.handle.net/11104/0307789>

- [SCOPUS](#)
- [DOI](#)
- [Inst. Repository](#)

0524430 - ÚACH 2021 RIV CH eng J - Journal Article

**Hradil, David - Hradilová, J. - Bezdička, Petr**

Clay Minerals in European Painting of the Mediaeval and Baroque Periods.

*Minerals*. Roč. 10, č. 3 (2020), č. článku 255. ISSN 2075-163X

**R&D Projects:** GA ČR(CZ) GA17-25687S

**Institutional Support:** RVO:61388980

**Keywords:** earth pigments \* ochres \* clay-based grounds \* powder X-ray microdiffraction \* provenance studies \* pottery clay \* kaolin \* painting \* gilding

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 2.250, year: 2018

<http://hdl.handle.net/11104/0308790>

Hradil, David

Permanent link: <http://hdl.handle.net/11104/0308790>

- [SCOPUS](#)
- [WOS](#)
- [DOI](#)
- [Inst. Repository](#)

0517273 - ÚACH 2021 RIV US eng J - Journal Article

**Hradilová, J. - Hradil, David - Pech, M. - Bezdička, Petr - Neděla, Vilém - Tihlaříková, Eva - Targowski, P.**

Complementary use of X-ray based imaging and analytical methods in the investigation of miniature portraits.

*Microchemical Journal*. Roč. 153, MAR (2020), č. článku 104371. ISSN 0026-265X

**R&D Projects:** GA MŠK(CZ) DG18P02OVV034

**Institutional Support:** RVO:61388980 ; RVO:68081731

**Keywords:** Environmental scanning electron microscopy \* Miniature portraits \* Painting technique \* Pigments \* X-ray fluorescence mapping \* X-ray micro-diffraction

Subject RIV: CA - Inorganic Chemistry; JA - Electronics & Optoelectronics, Electrical Engineering

Obor OECD: Inorganic and nuclear chemistry; Atomic, molecular and chemical physics (physics of atoms and molecules including collision, interaction with radiation, magnetic resonances, Mössbauer effect) (UPT-D)

**Impact factor:** 3.206, year: 2018

<https://www.sciencedirect.com/science/article/pii/S0026265X19322866?via%3Dihub>

Hradilová, J. Hradil, David

- Neděla, Vilém

- Targowski, P.

Permanent link: <http://hdl.handle.net/11104/0305514>

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0503104 - ÚMCH 2020 RIV GB eng J - Journal Article

**Chabane, H. - Livi, S. - Beneš, Hynek - Ladaviere, C. - Ecorchard, Petra - Duchet-Rumeau, J. - Gérard, J. F.**

Polyhedral oligomeric silsesquioxane-supported ionic liquid for designing nanostructured hybrid organic-inorganic networks.

*European Polymer Journal*. Roč. 114, May (2019), s. 332-337. ISSN 0014-3057

**Institutional Support:** RVO:61389013 ; RVO:61388980

**Keywords:** ionic liquid \* polyhedral oligomeric silsesquioxane (POSS) \* nanostructured network

Subject RIV: CD - Macromolecular Chemistry; CA - Inorganic Chemistry

Obor OECD: Polymer science; Inorganic and nuclear chemistry (UACH-T)

**Impact factor:** 3.621, year: 2018

<https://www.sciencedirect.com/science/article/pii/S0014305719302514?via%3Dihub>

Gérard, J. F.

Permanent link: <http://hdl.handle.net/11104/0294938>

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- [Result - R&D](#)

0503913 - ÚACH 2020 RIV GB eng J - Journal Article

**Ivanov, A. A. - Kononov, D.I. - Pozmogova, T.N. - Solovieva, A.O. - Melnikov, A. - Brylev, K. A. - Kuratieva, N.V. - Yanshole, V.V. - Kirakci, Kaplan - Lang, Kamil - Cheltygmasheva, S.N. - Kitamura, N. - Shestopalova, L.V. - Mironov, Y.V. - Shestopalov, M.A.**

Water-soluble Re6-clusters with aromatic phosphine ligands - from synthesis to potential biomedical applications.

*Inorganic Chemistry Frontiers*. Roč. 6, č. 4 (2019), s. 882-892. ISSN 2052-1553

**R&D Projects:** GA ČR(CZ) GA18-05076S

**Institutional Support:** RVO:61388980

**Keywords:** hexarhenium clusters \* rhenium cluster complexes \* supramolecular arrays

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 5.934, year: 2018

<https://pubs.rsc.org/en/content/articlelanding/2019/QI/C8QI01216D#!divAbstract>

Shestopalov, M.A.

Permanent link: <http://hdl.handle.net/11104/0296575>

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0518330 - ÚACH 2020 RIV GB eng J - Journal Article

**Janoš, P. - Ederer, J. - Došek, M. - Štojdl, J. - Henych, Jiří - Tolasz, Jakub - Kormunda, M. - Mazanec, K.**

Can cerium oxide serve as a phosphodiesterase-mimetic nanozyme?

*Environmental Science-Nano*. Roč. 6, č. 12 (2019), s. 3684-3698. ISSN 2051-8153

**R&D Projects:** GA ČR(CZ) GA19-07460S; GA MŠk(CZ) LM2015073

**Institutional Support:** RVO:61388980

**Keywords:** Cerium oxide \* Chemical warfare agents \* Organophosphate

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 7.704, year: 2018

<https://pubs.rsc.org/en/content/articlelanding/2019/EN/C9EN00815B#!divAbstract>

Janoš, P.

Permanent link: <http://hdl.handle.net/11104/0303494>

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0508679 - ÚACH 2020 RIV GB eng J - Journal Article

**Jerman, M. - Scheinherrová, L. - Medved, I. - Krejsová, J. - Doleželová, M. - Bezdička, Petr - Černý, R.**

Effect of cyclic wetting and drying on microstructure, composition and length changes of lime-based plasters.

*Cement and Concrete Composites*. Roč. 104, NOV (2019), č. článku 103411. ISSN 0958-9465

**Institutional Support:** RVO:61388980

**Keywords:** Composition \* Drying \* Length changes \* Lime plasters \* Microstructure \* Wetting

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

**Impact factor:** 5.172, year: 2018

<http://hdl.handle.net/11104/0299516>

Černý, R.

Permanent link: <http://hdl.handle.net/11104/0299516>

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- [Result - R&D](#)
- [Inst. Repository](#)

0521685 - FZÚ 2020 RIV US eng C - Proceedings Paper (International conf.)

**Kadlec, Christelle - Knížek, Karel - Hejtmánek, Jiří - Goian, Veronica - Buršík, Josef - Soroka, Miroslav - Němec, Hynek**

Insulator-metal transition in PrYCaCoO<sub>3</sub> thin films studied by terahertz and infrared spectroscopies.

2019 *International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz) /44./*. New York: IEEE, 2019, s. 1-2. International Conference on Infrared Millimeter and Terahertz Waves. ISBN 978-1-5386-8286-9. ISSN 2162-2027.

[International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz) /44./. Paris (FR), 01.09.2019-06.09.2019]

**R&D Projects:** GA ČR GA17-04412S

**Institutional Support:** RVO:68378271 ; RVO:61388980

**Keywords:** time-domain spectroscopy THz \* metal-insulator transition

Subject RIV: BM - Solid Matter Physics & Magnetism; CA - Inorganic Chemistry

Obor OECD: Condensed matter physics (including formerly solid state physics, supercond.); Inorganic and nuclear chemistry (UACH-T)

<https://ieeexplore.ieee.org/document/8874247>

Permanent link: <http://hdl.handle.net/11104/0306278>

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0509609 - ÚACH 2020 RIV CH eng J - Journal Article

**Khaydukova, M. - Militsyn, D. - Karnaukh, M. - Grüner, Bohumír - Selucký, P. - Babain, V. - Wilden, A. - Kirsanov, D. - Legin, A.**

Modified Diamide and Phosphine Oxide Extracting Compounds as Membrane Components for Cross-Sensitive Chemical Sensors.

*Chemosensors*. Roč. 7, č. 3 (2019), č. článku 41. E-ISSN 2227-9040

**Institutional Support:** RVO:61388980

**Keywords:** diamides of diglycolic acid \* CMPO \* potentiometric sensors \* lanthanides \* multisensor system

Subject RIV: CA - Inorganic Chemistry

Obor OECD: Inorganic and nuclear chemistry

<http://hdl.handle.net/11104/0300301>

Khaydukova, M.

Permanent link: <http://hdl.handle.net/11104/0300301>

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