

**A universality of ethane-bridged bis-porphyrin structural motif for effective supramolecular chirogenesis, sensor development, and light harvesting systems**

**Borovkov, Victor** The UGC-SAP Sponsored International Conference on New Horizons in Synthetic and Materials Chemistry (ICSMC-2015) : Mumbai, India, November 26-28, 2015 : abstract book 2015 / p. 8

**Aerobic cascade oxidation of substituted cyclopentane-1, 2-diones using metalloporphyrin catalysts [Online resource]**

**Oja, Karolin; Borovkov, Victor; Kananovich, Dzmitry; Järving, Ivar; Lopp, Margus** Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fmdk.ut.ee/teesid-2018/>

**Aerobic cascade oxidation of substituted cyclopentane-1,2-diones using metalloporphyrin catalysts**

**Maljutenko, Karolin; Borovkov, Victor; Kananovich, Dzmitry; Järving, Ivar; Lopp, Margus** Tetrahedron 2018 / p. 661–664 : ill <https://doi.org/10.1016/j.tet.2017.12.009> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**Aerobic oxidations in asymmetric synthesis : catalytic strategies and recent developments**

**Kananovich, Dzmitry; Elek, Gabor Zoltan; Lopp, Margus; Borovkov, Victor** Frontiers in chemistry 2021 / art. 614944 <https://doi.org/10.3389/fchem.2021.614944> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**An efficient method for longterm configurational stabilization of chiral tricyclic dipeptide via heterocomplexation approach**

Hu, Xiaoyun; Yin, Zhongyou; Guo, Jianxin; **Borovkov, Victor**; Shan, Zixing ChemistrySelect 2019 / p. 3210-3213 <https://doi.org/10.1002/slct.201900099>

**Application of ethane-bridged bis-porphyrin structural motif for effective supramolecular chirogenesis, sensor development, and light harvesting systems**

**Borovkov, Victor; Gathergood, Nicholas** 229th ECS Meeting : May 29 - June 2, 2016, San Diego, CA : abstract book 2016 / art. 836

**Application of octaethylporphyrin structural motif for supramolecular chirogenesis**

**Borovkov, Victor; Gathergood, Nicholas** Eighth [i.e. Ninth] International Conference on Porphyrins and Phthalocyanines (ICPP-9) : July 3-8, 2016, Nanjing, China 2016 / p. 33 <http://www.icpp-spp.org/icpp9/BOOKofABSTRACTS.pdf>

**Application of octaethylporphyrin structural motif for supramolecular chirogenesis**

**Borovkov, Victor** 227th ECS Meeting : May 24-28, 2015, Chicago, Illinois, USA : [abstracts] 2015 / p. 946 <https://ecs.confex.com/ecs/227/webprogram/Paper49194.html>

**Asymmetric Biginelli-like reaction catalyzed by chiral TADDOL-derived phosphoric acid bearing two hydroxyl groups**

Guo, Jianxin; Zhang, Rui; Yin, Zhongyou; Hu, Xiaoyun; **Borovkov, Victor** The 23rd International Electronic Conference on Synthetic Organic Chemistry 15 nov 2019 - 15 dec 2019 2019 / 8 p. : ill <https://doi.org/10.3390/ecsoc-23-06647>

**Asymmetric synthesis of 2-amino-8-oxo-9,10-epoxydecanoic acid via cyclopropane cleavage strategy [Online resource]**

**Elek, Gabor Zoltan; Koppel, Kaur; Borovkov, Victor; Lopp, Margus; Kananovich, Dzmitry** Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fmdk.ut.ee/teesid-2018/>

**Benchmarking computational methods and influence of guest conformation on chirogenesis in zinc porphyrin complexes**

**Osadchuk, Irina; Borovkov, Victor; Aav, Riina; Clot, Eric** Physical chemistry chemical physics 2020 / p. 11025–11037 <https://doi.org/10.1039/D0CP00965B> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**Benzyne-mediated nonconcerted pathway toward synthesis of sterically crowded [5]- and [7]oxahelicenoids, stereochemical and theoretical studies, and optical resolution of helicenes**

Gawade, Prashant M.; Khose, Vaibhav N.; Badani, Purav M.; **Kaabel, Sandra; Borovkov, Victor** Journal of organic chemistry 2019 / p. 860-868 : ill <https://doi.org/10.1021/acs.joc.8b02507> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**Book review of "Lanthanide metal-organic frameworks"**

**Borovkov, Victor** Frontiers in chemistry 2015 / p. 1-2 : ill <http://dx.doi.org/10.3389/fchem.2015.00050>

**Chiral Auxiliaries and Chirogenesis**

2021 <https://doi.org/10.3390/books978-3-0365-1017-0>

**Chiral Auxiliaries and Chirogenesis II**

2021 <https://doi.org/10.3390/books978-3-0365-1155-9>

### Chiral auxiliaries and chirogenesis ii

Symmetry 2021 / art. 1157 <https://doi.org/10.3390/sym13071157> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### Chiral heterocycle-based receptors for enantioselective recognition

Khose, Vaibhav N.; John, Marina E.; Pandey, Anita D.; **Borovkov, Victor**; Karnik, Anil V. Chiral Auxiliaries and Chirogenesis 2021 / p. 27-101 <https://doi.org/10.3390/books978-3-0365-1017-0> <https://doi.org/10.3390/sym10020034>

### Chiral heterocycle-based receptors for enantioselective recognition

Khose, Vaibhav N.; John, Marina E.; Pandey, Anita D.; **Borovkov, Victor**; Karnik, Anil V. Symmetry 2018 / 75 p : ill <https://doi.org/10.3390/sym10020034> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### Chiral recognition by supramolecular porphyrin-hemicucurbit[8]uril-functionalized gravimetric sensors

Magna, Gabriele; **Šakarašvili, Marko**; Stefanelli, Manuela; Giancane, Gabriele; Bettini, Simona; Valli, Ludovico; **Ustrnul, Lukas**; **Borovkov, Victor**; **Aav, Riina**; Monti, Donato; Di Natale, Corrado; Paolesse, Roberto ACS applied materials and interfaces 2023 / p. 30674–30683 <https://doi.org/10.1021/acsami.3c05177> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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### Chirogenesis in supramolecular systems on the basis of porphyrinoids

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### Chirogenesis in Zinc porphyrins : theoretical evaluation of electronic transitions, controlling structural factors and axial ligation

**Osadchuk, Irina**; **Aav, Riina**; **Borovkov, Victor**; Clot, Eric ChemPhysChem 2021 / p. 1817–1833 : ill <https://doi.org/10.1002/cphc.202100345> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### Conformational switching of ethano-bridged Cu<sub>2</sub>H<sub>2</sub>-bis-porphyrin induced by aromatic amines

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### Controlling chirogenic effects in porphyrin based supramolecular systems: theoretical analysis versus experimental observations

**Osadchuk, Irina**; **Luts, Hanna-Eliisa**; **Zahharova, Aleksandra**; **Tamm, Toomas**; **Borovkov, Victor** ChemPhysChem 2024 / art. e202400104 <https://doi.org/10.1002/cphc.202400104> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### Direct asymmetric three-component Mannich reaction catalyzed by chiral counteranion-assisted silver

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### Directional Approach to Enantiomerically Enriched Functionalized [7]Oxa-helicenoids and Groove-Based Selective Cyanide Sensing

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### Efficient synthesis of novel quinolinone derivatives via catalyst-free multicomponent reaction

Du, Rui; Han, Liangliang; Zhou, Zhongqiang; **Borovkov, Victor** Letters in organic chemistry 2020 / p. 403–407 <http://doi.org/10.2174/1570178616666190828092728>

### Enantio-differentiating hydrogenation of alkyl 3-oxobutanoates over tartaric acid-modified Ni catalyst: Enthalpy-entropy compensation effect as a tool for elucidating mechanistic features

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#### **Enantioselective one-pot synthesis of $\alpha,\beta$ -epoxy ketones via aerobic oxidation of cyclopropanols**

**Elek, Gabor Zoltan; Borovkov, Victor; Lopp, Margus; Kananovich, Dzmitry** Organic letters 2017 / p. 3544-3547 : ill <https://doi.org/10.1021/acs.orglett.7b01519> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

#### **Enantioselective synthesis of epoxyketones via aerobic oxidation of cyclopropanols**

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#### **Enhanced sensing properties of cobalt bis-porphyrin derivative thin films by a magneto-plasmonic-opto-chemical sensor**

**Colombelli, A.; Manera, Maria Grazia; Borovkov, Victor; Giancane, Gabriele** Sensors and actuators B : chemical 2017 / p. 1039-1048 : ill <https://doi.org/10.1016/j.snb.2017.01.192> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

#### **Ethane-bridged bisporphyrin conformational changes as an effective analytical tool for nonenzymatic detection of urea in the physiological range**

**Buccolieri, Alessandro; Hasan, Mohammed; Bettini, Simona; Borovkov, Victor** Analytical chemistry 2018 / p. 6952-6958 : ill <https://doi.org/10.1021/acs.analchem.8b01230> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

#### **Ethane-bridged bis-porphyrin structural motif for effective supramolecular chirogenesis, sensor development, and light harvesting**

**Borovkov, Victor** The International Conference on Polymers and Advanced Materials (POLYMAT-2015) : Huatulco, Mexico, October 18-22, 2015 : abstracts book 2015 / p. 9-10

#### **Facile and environmentally benign aerobic cascade oxidation of substituted cyclopentane-1,2-diones using metalloporphyrin catalysts [Online resource]**

**Maljutenko, Karolin; Borovkov, Victor; Kananovich, Dzmitry; Lopp, Margus** Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märts 2017, Tartu : teesid] 2017 / [1] p. : ill <http://fmdtk.ut.ee/teesid/>

#### **Helicene-based chiral auxiliaries and chirogenesis**

**Hasan, Mohammed; Borovkov, Victor** Symmetry 2018 / 48 p. : ill <https://doi.org/10.3390/sym10010010> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

#### **Helicene-Based Chiral Auxiliaries and Chirogenesis**

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#### **Hemicucurbituril complexes with Porphyrins - chirality induction and sensing**

**Ustrnul, Lukas; Šakarašvili, Marko; Konrad, Nele; Borovkov, Victor; Aav, Riina** Twelfth International Conference on Porphyrins and Phthalocyanines : ICPP-12 : book of abstracts 2022 / p. 318 [http://www.icpp-spp.org/img\\_icpp12/ICPP-12%20BOA.pdf](http://www.icpp-spp.org/img_icpp12/ICPP-12%20BOA.pdf)

#### **Heterocomponent ternary supramolecular complexes of porphyrins : a review**

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#### **Highly chemo- and regioselective synthesis and subsequent directional catalyst-free transformation of enantiopure bioxirane derivatives**

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#### **Highly chemoselective solvent-free synthesis of 1,3,5-triaryl-1,5- diketones: crystallographic investigation and intramolecular weak bifurcated H bonds involving aliphatic C-H group**

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**Host-guest complexes of 2-aminocyclohexyl thioureas and zinc porphyrins: chiroptic properties and binding mechanism**  
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**Importance of molecular symmetry for enantiomeric excess recognition by NMR**

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**Medium viscosity effect on fluorescent properties of Sn(IV)-tetra(4-sulfonatophenyl)porphyrin complexes in buffer solutions**

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**Mixed oxime-functionalized IL/16-s-16 Gemini surfactants system: physicochemical study and structural transitions in the presence of promethazine as a potential chiral pollutant**

Pandya, Subhashree Jayesh; **Kapitanov, Illia**; **Borovkov, Victor**; Ghosh, Kallol K.; **Karpichev, Yevgen** Chemosensors 2022 / art. 46 <https://doi.org/10.3390/chemosensors10020046> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Porphyrin-based (chir)optical sensing of amino-functionalized thiourea organocatalysts**

**Konrad, Nele**; Horetski, Matvey; Sihtmäe, Mariliis; Osadchuk, Irina; Truong, Khai-Nghi; **Borovkov, Victor**; Aav, Riina; **Kananovich, Dzmitry** Twelfth International Conference on Porphyrins and Phthalocyanines : ICPP-12 : book of abstracts 2022 / p. 393 [http://www.icpp-spp.org/img\\_icpp12/ICPP-12%20BOA.pdf](http://www.icpp-spp.org/img_icpp12/ICPP-12%20BOA.pdf)

**Porphyrin-based hybrid nanohelices : cooperative effect between molecular and supramolecular chirality on amplified optical activity**

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**Preface**

**Borovkov, Victor**; Aav, Riina Chirogenesis in Chemical Science 2023 / p. vii-xi [https://doi.org/10.1142/9789811259227\\_fmatter](https://doi.org/10.1142/9789811259227_fmatter)

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**A quinoline-appended cyclodextrin derivative as a highly selective receptor and colorimetric probe for nucleotides**

Kanagaraj, K.; Xiao, C.; Rao, M.; Fan, C.; **Borovkov, Victor**; Cheng, G.; Zhou, D.; Zhong, Z.; Su, D.; Yu, X.; Yao, J.; Hao, T.; Wu, W.; Chruma, J.J.; Yang, C. iScience 2020 / art. 100927, 67 p. : ill <https://doi.org/10.1016/j.isci.2020.100927>

**Self-assembly of chiral cyclohexanohemicucurbit[n]urils with bis(Zn porphyrin): size, shape, and time-dependent binding**

**Šakarašvili, Marko**; Ustrnul, Lukas; Suut, Elina; Nallaparaju, Jagadeesh Varma; Mishra, Kamini Atindrakumar; **Konrad, Nele**; Adamson, Jasper; **Borovkov, Victor**; Aav, Riina Molecules 2022 / art. 937, 13 p. : ill <https://doi.org/10.3390/molecules27030937> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Spectroscopic study of (all-R,R)-cyclohexanohemicucurbit[8]uril and its host-guest supramolecular hexafluorophosphate complexes**

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**Stereospecific synthesis of cyclic sulfite esters with sulfur-centered chirality via diastereoselective strategy and intramolecular H-Bonding assistance**

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**Sui Generis helicene-based supramolecular chirogenic system : enantioselective sensing, solvent control, and application in chiral group transfer reaction**

**Hasan, Mohammed;** Khose, Vaibhav N.; Mori, Takuzo; **Borovkov, Victor;** Karnik, Anil V. ACS omega 2017 / p. 592-598 : ill  
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**Supramolecular chirogenesis in a sterically hindered Porphyrin : a critical theoretical analysis**

**Osadchuk, Irina; Luts, Hanna-Eliisa;** Norvaiša, Karolis; **Borovkov, Victor;** Senge, Mathias O. Chemistry : a European journal 2023 / art. e202301408 <https://doi.org/10.1002/chem.202301408>

**Supramolecular chirogenesis in a sterically hindered porphyrin: a critical theoretical analysis**

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**Supramolecular Chirogenesis in bis-porphyrin: crystallographic structure and CD spectra for a complex with a chiral guanidine derivative**

**Osadchuk, Irina; Konrad, Nele;** Truong, Khai-Nghi; Rissanen, Kari; Clot, Eric; **Aav, Riina; Kananovich, Dzmitry; Borovkov, Victor** Symmetry 2021 / 14 p. : ill <https://doi.org/10.3390/sym13020275> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Supramolecular Chirogenesis in bis-porphyrin: crystallographic structure and CD spectra for a complex with a chiral guanidine derivative**

**Osadchuk, Irina; Konrad, Nele;** Truong, Khai-Nghi; **Aav, Riina; Kananovich, Dzmitry; Borovkov, Victor** Chiral Auxiliaries and Chirogenesis II 2021 / p. 83-96 <https://doi.org/10.3390/sym13020275> <https://doi.org/10.3390/books978-3-0365-1155-9>

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**Supramolecular chirogenesis in porphyrin chemistry : Recent developments and further prospects**

**Borovkov, Victor** Twelfth International Conference on Porphyrins and Phthalocyanines : ICPP-12 : book of abstracts 2022 / p. 30  
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**Supramolecular chirogenesis in zinc porphyrins by enantiopure hemicucurbit[n]urils (n = 6, 8)**

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