

## Fizikas institūta 2015. gada publikācijas

1. **Bojarevičs, Andris.** Scopus ID:7801311467. Contactless magnetic excitation of acoustic cavitation in liquid metals / Andris Bojarevičs, Ilmars Grants, Gunter Gerbeth // Journal of Applied Physics. - ISSN 0021-8979. - Vol. 117 (20) (2015), Article nr.: 204901.DOI: 10.1063/1.4921164. -URL : <http://scitation.aip.org/content/aip/journal/jap/117/20/10.1063/1.4921164>
2. Combustion dynamics of swirling flame at thermochemical conversion of biomass / Inesa Barmina, Antons Kolmickovs, Raimonds Valdmanis, Maija Zake. - References: p.654 // Chemical Engineering Transactions. - ISSN 2283-9216. - Vol.43 (2015), p.649-654: il. DOI: 10.3303/CET1543109. - URL: <http://www.aidic.it/cet/15/43/109.pdf>
3. Control of combustion dynamics by an electric field / Inesa Barmina, Antons Kolmickovs, Raimonds Valdmanis, Maija Zake. - References: p.978 // Chemical Engineering Transactions. - ISSN 2283-9216. - Vol.43 (2015), p.973-978. DOI: 10.3303/CET1543163. - URL: <http://www.aidic.it/cet/15/43/163.pdf>
4. Diffusive and thermodiffusive transfer of magnetic nanoparticles in porous media / Viesturs Sints, Elmars Blums, Michail Maiorov, Gunars Kronkalns // European Physical Journal E. - ISSN 1292-8941. - Vol.38, N 5 (May, 2015), p.1-8. DOI: 10.1140/epje/i2015-15035-2. - URL: <http://link.springer.com/article/10.1140%2Fepje%2Fi2015-15035-2>
5. Dynamic neutron radiography for liquid metals applications / M. Scepanskis, A. Jakovics, K. Thomsen, T. Beinerts, M. Sarma, P. Vontobel, R. Nikoluskins, A. Bojarevics // 8th International Conference on Electromagnetic Processing of Materials EPM'2015, Cannes, France : Conference Proceedings. - Cannes : Saint-Martin-d'Hères : SIMAP laboratory - EPM group, cop., 2015. - ISBN 9782955386101. - 4 p. URL: [https://www.researchgate.net/publication/284031604\\_Dynamic\\_Neutron\\_Radiography\\_for\\_Liquid\\_Metal\\_Applications](https://www.researchgate.net/publication/284031604_Dynamic_Neutron_Radiography_for_Liquid_Metal_Applications)
6. Hydrothermal synthesis of cobalt ferrite nanosized powders / I. Zalite, G. Heidemane, L. Kuznetsova, M. Maiorov // 12th Russia/CIS/Baltic/Japan Symposium on Ferroelectricity and 9th International Conference on Functional Materials and Nanotechnologies (RCBJSF-2014-FM&NT) 29 September to 2 October 2014, Riga, Latvia. - (IOP Conference Series : Materials Science and Engineering ; Vol.77). - ISSN 1757-8981. - N 1 (2015). DOI:10.1088/1757-899X/77/1/012011. - URL: <http://iopscience.iop.org/1757-899X/77/1/012011/>
7. A hypothesis on the electromagnetic cause of white etching cracks in bearing steel : wind turbine tribology / Mihails Šcepanskis, Andris Jakovičs, Imants Kaldre, Walter Holweger, Bernard Nacke // STLE : Society of Tribologists and Lubrication Engineers : 70th Annual Meeting and Exhibition, May 17-21, 2015, Dallas, USA. - Dallas, 2015. - 3 p.
8. The impact of EM field on combustion / J. Valdmanis, I. Barmina, M. Zake, R. Valdmanis, A. Cipijs // Magnetohydrodynamics. - ISSN 0024-998X. - Vol. 51, N 2 (2015), p.311-319. - URL: <http://mhd.sal.lv/contents/2015/2/MG.51.2.16.R.html>
9. Magnetic field effect on the corrosion processes at the Eurofer-Pb-17Li flow interface / Gázquez, M.C., Hernández, T. , Muktepavela, F., Platācis, E., Shishko, A. // Journal of Nuclear Materials. - ISSN 0022-3115. - Vol. 465 (2015), Article nr.: 49162, p. 633-639. DOI: 10.1016/j.jnucmat.2015.06.024. - URL: <http://datubazes.lanet.lv:2074/science/article/pii/S0022311515300490>

10. Mechanical characterization of TiO<sub>2</sub> nanofibers produced by different electrospinning techniques / Mikk Vahtrus, Andris Šutka, Sergei Vlassov, Anna Šutka, Boris Polyakov, Rando Saar, Leonid Dorogin, Rünno Lõhmus. - References: p.102-103 // *Materials Characterization*. - ISSN 1044-5803. - Vol.100 (2015), p.98-103 : il. - URL: <http://www.sciencedirect.com/science/article/pii/S1044580314003994#>
11. Neutron radiography visualization of solid particles in stirring liquid metal / M. Sarma, M. Ščepanskis, A. Jakovičs, K. Thomsen, R. Nikoluškis, P. Vontobel, T. Beinerts, A. Bojarevičs, E. Platacis // *Physics Procedia*. - ISSN 1875-3892. - Vol.69 : 10th World Conference on Neutron Radiography (WCNR-10), October 5-10, Grindewald, Switzerland : proceedings (2015), p.457-463 : il. DOI:10.1016/j.phpro.2015.07.064. - URL: <http://www.sciencedirect.com/science/article/pii/S1875389215006744>
12. The numerical model of electrothermal deformations of carbides in bearing steel as the possible cause of white etching cracks initiation / Mihails Ščepanskis, Andris Jakovičs, Imants Kaldre, Walter Holweger, Bernard Nacke, Annika Martina Diederichs // *Tribology Letters*. - ISSN 1023-8883. - Vol.59, N 2 (2015), Article nr.: 37. DOI: 10.1007/s11249-015-0564-8. - URL: <http://link.springer.com/article/10.1007%2Fs11249-015-0564-8>
13. Photocatalytic activity of anatase-nickel ferrite heterostructures / Andris Šutka, Martins Millers, Nicola Döbelin, Rainer Pärna, Martins Vanags, Mihael Maiorov, Janis Kleperis, Tanel Käämbre, Urmas Joost, Ergo Nõmmiste, Vambola Kisand, Maris Knite // *Physica Status Solidi (A) Applications and Materials Science*. - ISSN 1862-6300. - Vol. 212 (4) (2015), p.796-803. DOI: 10.1002/pssa.201431681. - URL: <http://onlinelibrary.wiley.com/doi/10.1002/pssa.201431681/full>
14. Possibility to use cylindrical pumps with permanent magnets in metallurgical facilities for aluminium alloys / Beinerts, T., Bucenieks, I., Bojarevics, A., Gelfgat, Yu. // *Magnetohydrodynamics*. - ISSN 0024-998X. - Vol.51, N 4 (2015), p.757-769. - URL: <http://eds.b.ebscohost.com/eds/detail/detail?sid=7b3c17f8-80db-407d-bf4b-11ec6ccffd8a%40sessionmgr111&vid=0&hid=111&bdata=JnNpdGU9ZWRzLWxpdmU%3d#AN=112393331&db=a9h>
15. A report on the first neutron radiography experiment for dynamic visualization of solid particles in an intense liquid metal flow / M. Ščepanskis, M. Sarma, R. Nikoluškis, K. Thomsen, A. Jakovičs, P. Vontobel, T. Beinerts, A. Bojarevičs, E. Platacis // *Magnetohydrodynamics*. - ISSN 0024-998X. - Vol.51, N 2 (2015), p.257-266. - URL: <http://eds.b.ebscohost.com/eds/pdfviewer/pdfviewer?sid=ee6bfe02-d5b9-49b2-8f91-3fe570366361%40sessionmgr110&vid=1&hid=117>. - URL: <http://mhd.sal.lv/Search/index.php>
16. Segregation control at directional solidification using magnetic field and electric current / I. Kaldre, Y. Fautrelle, J. Etay, A. Bojarevics, L. Buligins // *Magnetohydrodynamics*. - ISSN 0024-998X. - Vol.51, N 3 (2015), p.445-451. - URL: <http://eds.b.ebscohost.com/eds/pdfviewer/pdfviewer?sid=5e323b7e-360a-4ab0-a7d3-bccbdd24fb3c%40sessionmgr120&vid=1&hid=117>
17. Simulation of liquid metal flow induced by counter-rotating permanent magnets in a rectangular crucible / M. Ščepanskis, E.Yu. Koroteeva, V. Geža, A. Jakovičs. - References : p.43-44 // *Magnetohydrodynamics*. - ISSN 0024-998X. - Vol.51, N 1 (2015), p.37-44 : il. - URL: <http://mhd.sal.lv/contents/2015/1/index.html>
18. Study of the structural phase transformation of iron oxide nanoparticles from an Fe<sup>2+</sup> ion source by precipitation under various synthesis parameters and temperatures / A. Šutka, S. Lagzdina, T. Käämbre, R. Pärna, V. Kisand, J. Kleperis, M. Maiorov, A. Kikas, I. Kuusik, D. Jakovlevs. - Bibliogr.: p.478-479 // *Materials Chemistry and Physics*. - ISSN 2255-9000. - Vol.149/150 (2015), p.473-479 : fig. - URL:

[http://www.sciencedirect.com/science?\\_ob=ArticleListURL&\\_method=list&\\_ArticleListID=-700781555&\\_sort=r&\\_st=13&view=c&md5=58297fae1197e3cf3e654df8a1990912&searchtype=a](http://www.sciencedirect.com/science?_ob=ArticleListURL&_method=list&_ArticleListID=-700781555&_sort=r&_st=13&view=c&md5=58297fae1197e3cf3e654df8a1990912&searchtype=a)

19. Synthesis and properties of magnetic iron oxide/platinum nanocomposites / V. Serga, M. Maiorov, L. Kulikova, A. Krumina, D. Karashanova. - Ietver bibliogr. // 12th Russia/CIS/Baltic/Japan Symposium on Ferroelectricity and 9th International Conference on Functional Materials and Nanotechnologies (RCBJSF–2014–FM&NT) 29 September to 2 October 2014, Riga, Latvia. - (IOP Conference Series : Materials Science and Engineering ; Vol.77). - ISSN 1757-8981. - N 1 (2015). DOI:10.1088/1757-899X/77/1/012014. - URL: <http://iopscience.iop.org/1757-899X/77/1/012014/>
20. **Zablotsky, Dmitry.** Pore-scale simulation of magnetosolutal microconvection in ferrofluid saturated porous structures / Zablotsky, D., Blums, E. // Magnetohydrodynamics. - ISSN 0024-998X. - Vol.51, N 3 (2015), p.561-566. - URL: [http://mhd.sal.lv/authors/Zablotsky\\_D.html](http://mhd.sal.lv/authors/Zablotsky_D.html). - URL: [http://pamir.sal.lv/2014/cd/container/F.1.01=Zablotsky\\_Pamir14.pdf](http://pamir.sal.lv/2014/cd/container/F.1.01=Zablotsky_Pamir14.pdf)
21. **Zablotsky, Dmitry.** Numerical investigation of thermo-magneto-solutal flow of ferrocolloid through ordered and disordered permeable membranes / D. Zablotsky, D., E. Blums // European Physical Journal E. - ISSN 1292-8941. - Vol.38, N 5 (May,2015), 11 p. : il., diagr. DOI: 10.1140/epje/i2015-15038-y. - URL: <http://link.springer.com/article/10.1140%2Fepje%2Fi2015-15038-y>