

## **Барaban А.П. Публикации 2018-2022**

1. A.P. Baraban, I.A. Chernov, V.A. Dmitriev, D.I. Elets, I.E. Gabis, V.G. Kuznetsov, A.P. Voyt The Mg<sub>2</sub>NiH<sub>4</sub> film on nickel substrate: synthesis, properties and kinetics of formation Thin Solid Films 762 (2022) 139556 <https://doi.org/10.1016/j.tsf.2022.139556>
2. V. F. Myshkin, Wang Cailun, V. A. Khan, A. P. Baraban, A. D. Poberezhnikov, and D. D. Shukshina Ion and water molecule distribution over illite particle surface. Russian Physics Journal, Vol. 65, No. 4, 605-609, August, 2022 (Russian Original No. 4, April, 2022) DOI 10.1007/s11182-022-02675-5
3. Effect of temperature on the diffusion and sorption of cations in clay vermiculite Wang C., Myshkin V.F., Khan V.A., Poberezhnikov A.D., Baraban A.P. ACS Omega. 2022. T. 7. № 14. C. 11596-11605. **DOI:** 10.1021/acsomega.1c06059
4. A. P. Baraban, V. A. Dmitriev, I. E. Gabis, Yu. V. Petrov, and V. A. Prokof'ev Joint Analysis of Cathodoluminescence and Electroluminescence of SiO<sub>2</sub> Layers on Silicon Optics and Spectroscopy, 2022, Vol. 130, No. 4, pp. 239–243. **DOI:** 10.1134/S0030400X22040026
5. Luminescence of insulator layers on silicon excited by electrons Baraban A.P., Dmitriev V.A. Physics of Complex Systems. 2021. T. 2. № 1. C. 9-14.
6. Baraban, A. P. ; Dobrotvorskii, M. A. ; Elets, D. I. ; Gabis, I. E. ; Kuznetsov, V. G. ; Piven, V. A. ; Voyt, A. P. ; Selivanov, A. A. / Synthesis and properties of hydrogenated aluminum thin film by reactive sputtering. Thin Solid Films. 2020. v. 709. p. 138217. **DOI** [10.1016/j.tsf.2020.138217](https://doi.org/10.1016/j.tsf.2020.138217)
7. Petrov, Yu.V. ; Grigoryev, E.A. ; Baraban, A.P. / Helium focused ion beam irradiation with subsequent chemical etching for the fabrication of nanostructures. Nanotechnology, 2020, v. 31, № 21, [215301]. **DOI:** [10.1088/1361-6528/ab6fe3](https://doi.org/10.1088/1361-6528/ab6fe3)
8. Baraban, A. P. ; Denisov, E. A. ; Dmitriev, V. A. ; Drozd, A. V. ; Drozd, V. E. ; Selivanov, A. A. ; Seisyany, R. P. / Features of SiO<sub>2</sub> Layers Synthesized on Silicon by Molecular Layer Semiconductors. 2020 Vol. 54, No. 4, pp. 506–510. **DOI:** 10.1134/S106378262004003X
9. A.P. Baraban, V.A. Dmitriev, V. E. Drozd, V.A. Prokofiev, Y. Petrov Electroluminescence of Ta<sub>2</sub>O<sub>5</sub> Films Formed by Molecular Layer Deposition Optics and Spectroscopy, 2020, Vol. 128, No. 2, pp. 220–22. **DOI:** 10.1134/S0030400X20020046
10. A. Baraban , I. Gabis, S. Kozhakhmetov, M. Murzinova, V. Piven, N. Sidorov, I. Sipatov, A. Voyt Structure and hydrogen permeability of V-15Ni alloy International Journal of Hydrogen Energy , 44 ( 2019 ) P. 2742 – 27498. doi.org/10.1016/j.ijhydene.2019.08.224
11. Gritsenko, V. A. ; Gismatulin, A. A. ; Baraban, A. P. ; Chin, A. Mechanism of Stress Induced Leakage Current in Si<sub>3</sub>N<sub>4</sub> . Materials Research Express. 2019 ; Volume 6, Number 7, 6401. [doi.org/10.1088/2053-1591/ab1223](https://doi.org/10.1088/2053-1591/ab1223)
12. A.P. Baraban , Yu. V. Petrov, E. V. Ubyivovk Fabrication of nanopores in silicon nitride membrane by means of wet etching enhanced by focused helium ion beam irradiation AIP Conference Proceedings (2019) **2064**, 030012-15; [doi.org/10.1063/1.5087674](https://doi.org/10.1063/1.5087674)

13. A.P. Baraban , A. A. Selivanov, V. A. Dmitriev, A. V. Drozd, and V. E. Drozd Cathodoluminescence of TiO<sub>2</sub> Films Formed by Molecular Layer Deposition Technical Physics Letters, 2019, Vol. 45, No. 3, pp. 255–257. **DOI:** 10.1134/S1063785019030210
14. Baraban A.P., Samarin S.N., Prokofiev V.A., Dmitriev V.A., Selivanov A.A., Petrov Y.V. Luminescence of SiO<sub>2</sub> layers on silicon at various types of excitation. Journal of Luminescence , v.205 (2019) p.102-109 [doi.org/10.1016/j.jlumin.2018.09.009](https://doi.org/10.1016/j.jlumin.2018.09.009).
15. Yu.V. Petrov, E.A. Grigoryev, T.V. Sharov, A.P. Baraban Effect of helium ion beam treatment on wet etching of silicon dioxide Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms Volume 418, 1 March 2018, Pages 94–100 [doi.org/10.1016/j.nimb.2018.01.011](https://doi.org/10.1016/j.nimb.2018.01.011)