

CURRICULUM VITAE



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Education:

- 1980 – M. Sc. Urals State University, Ekaterinburg, Russian Federation (Physics)
1990 – Ph. D. Institute for Single Crystals NASU (Solid-State Physics)
2006 – Senior Researcher (Solid-State Physics), Institute for Single Crystals NASU, Kharkiv

Career/Employment:

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|---------------|-----------------------|--|
| 1980-1982 | Junior Researcher | Institute of Metals Physics of Urals Department of USSR Academy of Science, Ekaterinburg, Russia |
| 1983-1993 | Scientific Researcher | Physics-Technical Department of Kharkiv State University, Kharkiv, Ukraine |
| 1993 till now | Senior Researcher | Institute for Single Crystals NASU, Kharkiv, Ukraine |

Main field of activity and current research interest:

Investigations of Surface Composition and Electron Structure of Functional Materials with X-ray Photoelectron Spectroscopy;
Optical Ceramics, Nanotechnologies.

Honors, Awards, Fellowships, Membership of Professional Societies:

IWISE (International Women in Science and Engineering) fellow.

Publications and patents:

39 Original Articles (Scopus), 1 Patent; **h-index: 11**

<https://www.researchgate.net/profile/Mariya-Dobrotvorskaya/scores>

<https://www.scopus.com/authid/detail.uri?authorId=57212091837>

Selected recent publications:

1. N.A. Safronova, O.S. Kryzhanovska, A.G. Doroshenko, S.V. Parkhomenko, I.O. Vorona, **M.V. Dobrotvorska**, A.T. Budnikov, A.V. Tolmachev, R.P. Yavetskiy. Effect of solid loading on properties of $Y_2O_3-Al_2O_3-Nd_2O_3$ powder mixtures obtained by planetary ball milling and ceramics based on them // *Ceramics International* 48 (2022) 33003–33010. <https://doi.org/10.1016/j.ceramint.2022.07.232>. **Q1**.
2. D.Yu. Kosyanov, A.A. Vornovskikh, A.M. Zakharenko, E.A. Gridasova, R.P. Yavetskiy, **M.V. Dobrotvorskaya**, A.V. Tolmachev, O.O. Shichalin, E.K. Papynov, A.Yu. Ustinov, V.G. Kuryavy, A.A. Leonov, S.A. Tikhonov. Influence of sintering parameters on transparency of reactive SPSed Nd^{3+} :YAG ceramics // *Optical Materials* 112 (2021) 110760. <https://doi.org/10.1016/j.optmat.2020.110760>. **Q2**.
3. N.A. Safronova, R.P. Yavetskiy, O.S. Kryzhanovska, **M.V. Dobrotvorska**, A.E. Balabanov, I.O. Vorona, A.V. Tolmachev, V.N. Baumer, I. Matolínova, D.Yu. Kosyanov,

- O.O. Shichalin, E.K. Papynov, S. Hau, C. Gheorghe, A novel IR-transparent Ho³⁺:Y₂O₃–MgO nanocomposite ceramics for potential laser applications, *Ceramics International* 47 (2021) 1399–1406. <https://doi.org/10.1016/j.ceramint.2020.08.263>, **Q1**.
4. I.O. Vorona, A.E. Balabanov, **M.V. Dobrotvorska**, R.P. Yavetskiy, O.S. Kryzhanovska, L.Y. Kravchenko, S.V. Parkhomenko, P.V. Mateychenko, V.N. Baumer, I. Matolínová. Effect of MgO doping on the structure and optical properties of YAG transparent ceramics // *Journal of the European Ceramic Society*, 40 (2020) 861-866. <https://doi.org/10.1016/j.jeurceramsoc.2019.10.048>. **Q1**.
 5. N.A. Safronova, R.P. Yavetskiy, O.S. Kryzhanovska, S.V. Parkhomenko, A.G. Doroshenko, **M.V. Dobrotvorska**, A.V. Tolmachev, R. Boulesteix, A. Maître, T. Zorenko, Yu. Zorenko, Fabrication and VUV luminescence of Lu₂O₃:Eu³⁺ (5 at.%) nanopowders and transparent ceramics, *Optical Materials* 101 (2020) 109730. <https://doi.org/10.1016/j.optmat.2020.109730>. **Q2**.
 6. N.A. Safronova, O.S. Kryzhanovska, **M.V. Dobrotvorska**, A.E. Balabanov, A.V. Tolmachev, R.P. Yavetskiy, S.V. Parkhomenko, R. Brodskii, V.N. Baumer, D.Yu. Kosyanov, O.O. Shichalin, E.K. Papynov, Jiang Li, Influence of sintering temperature on structural and optical properties of Y₂O₃–MgO composite SPS ceramics, *Ceramics International*, 46 (2020) 6537–6543. <https://doi.org/10.1016/j.ceramint.2019.11.137>, **Q1**.
 7. I.O. Vorona, R.P. Yavetskiy, **M.V. Dobrotvorskaya**, A.G. Doroshenko, S.V. Parkhomenko, A.V. Tolmachev, D.Yu. Kosyanov, L. Gheorghe, C. Gheorghe, S. Hau, M. Enculescu. 1532 nm sensitized luminescence and up-conversion in Yb,Er:YAG transparent ceramics // *Optical Materials* 77C (2018) 221-225. <https://doi.org/10.1016/j.optmat.2018.01.038>. **Q2**.
 8. R.P. Yavetskiy, **M.V. Dobrotvorskaya**, A.G. Doroshenko, A.V. Tolmachev, I.A. Petrusha, V.Z. Turkevich, R. Tomala, D. Hreniak, W. Streck, V.N. Baumer, Fabrication and luminescent properties of (Y_{0.99}Eu_{0.01})₂O₃ transparent nanostructured ceramics // *Optical Materials* 78 (2018) 285-291. <https://doi.org/10.1016/j.optmat.2018.02.034>. **Q2**.
 9. E.I. Rogacheva, A.V. Budnik, **M.V. Dobrotvorskaya**, A.G. Fedorov, S.I. Krivonogov, P.V. Mateychenko, O.N. Nashchekina, A.Yu. Sipatov. Growth and structure of thermally evaporated Bi₂Te₃ thin films // *Thin Solid Films* 612 (2016) 128-134. <https://doi.org/10.1016/j.tsf.2016.05.046>. **Q2**.
 10. O.O. Matvienko, Yu.N. Savin, O.S. Kryzhanovska, O.M. Vovk, **M.V. Dobrotvorska**, N.V. Pogorelova, V.V. Vashchenko. Dispersion and aggregation of quantum dots in polymer-inorganic hybrid films // *Thin Solid Films* 531 (2013) 226-230. <https://doi.org/10.1016/j.tsf.2013.03.046>. **Q2**.