

# Malykh Anastasiya Vladimirovna

## *Curriculum Vitae*

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| DATE AND PLACE OF BIRTH | 16 may 1978, Saint-Petersburg, Russia.                                                                                                                                                                                                                                                                             |
| EDUCATION               | Physics department of Novgorod State University (1995–2001), diploma with distinction.<br><br>Graduate student NovSU, LNP JINR (2001–2004).                                                                                                                                                                        |
| POSITION                | Acting Junior Researcher, Few-Body System group, LTPh JINR (2004-2007)<br><br>Junior Researcher, Few-Body System group, LTPh JINR (26.04.2008-04.05.2010)<br><br>Researcher, Few-Body System group, LTPh JINR (05.05.2010-till now).                                                                               |
| MASTER DIPLOMA          | “Path integral formalism in continuous problems of statistical physics” (2001).                                                                                                                                                                                                                                    |
| PHD THESIS              | “Study of spectra, scattering and decay in three-body system with coulomb and contact interactions” (17.12.2008).                                                                                                                                                                                                  |
| NUMBER OF PUBLICATIONS  | 14                                                                                                                                                                                                                                                                                                                 |
| SCIENTIFIC INTERESTS    | Few-body systems at low energies including such issues as bound state energies, decay width and energies of long-living states, as well as characteristics of low-energy scattering (scattering length, coefficient of recombination) One of the goals: a study of few-body processes in quantum gases and nuclei. |

1. O.Yu. Volnyanskaya , A.V. Malykh, *New representation of the statistical sum of the Ising model via the functional integral*, Vestn. NovGU, V. **10**, p. 74-76 (1998).
2. O. I. Kartavtsev, A. V. Malykh, and V. P. Permyakov, *Effect of  $dt\mu$  quasinucleus structure on energy levels of the  $(dt\mu)Xee$  exotic molecule*, Phys. Rev. A **70**, 022504 (2004).
3. S. I. Fedotov, O. I. Kartavtsev, V. I. Kochkin, and A. V. Malykh, *3-cluster structure of the  $0^+$  states in  $^{12}C$  and the effective  $\alpha - \alpha$  interactions*, Phys. Rev. C **70**, 014006 (2004).
4. S. I. Fedotov, O. I. Kartavtsev, and A. V. Malykh, *Effective three-body interactions in the  $\alpha$ -cluster model for the  $^{12}C$  nucleus*, Eur. Phys. J. A **26**, 201 (2005).
5. O. I. Kartavtsev, A. V. Malykh, *Universal low-energy properties of three two-dimensional particles*, Phys. Rev. A **74**, 042506 (2006).
6. O. I. Kartavtsev, and A. V. Malykh, *Low-energy three-body dynamics in binary quantum gases*, J. Phys. B **40**, 1429 (2007).
7. S. I. Fedotov, O. I. Kartavtsev, and A. V. Malykh, *Effective three-body interactions in the  $\alpha$ -cluster model for the  $^{12}C$  nucleus*, Models and Methods in Few- and Many-Body Systems. Proc. of the DST-UNISA-JINR Symposium 2007, editor S.A. Sofianos, Pretoria, UNISA Press, pages 64–73, (2007).
8. O. I. Kartavtsev and A. V. Malykh, *Universal description of the rotational-vibrational spectrum of three particles with zero-range interactions*, Pis'ma ZhETF **86**, 713 (2007).
9. O. I. Kartavtsev and A. V. Malykh, *Universal three-body dynamics in binary mixtures of ultra-cold atoms* Few-Body Syst. **44**, 229-234 (2008).
10. O.I. Kartavtsev, A.V.Malykh *Bound states and scattering lengths of three two-component particles with zero-range interactions under one-dimensional confinement*, ZhETF **135**, 419 (2009).
11. S. I. Fedotov, O. I. Kartavtsev, and A. V. Malykh, *Consistent description of the  $^{12}C(0_2^+)$  state*, Few-Body Syst. **45**, 153-155 (2009).
12. О. И. Картавецев, А. В. Малых, *Universal properties of ultracold two-component three-body systems*, Vestnik SpbGU, seria 4 **3**, 121-125 (2010).
13. S.I. Fedotov, O. I. Kartavtsev, and A. V. Malykh, *Consistent alpha-cluster description of the  $^{12}C(0_2^+)$  "Hoyle" resonance*, JETP Letters **92**, 10, 715-719 (2010).
14. O.I. Kartavtsev, A.V.Malykh, *Recent Advances in Description of Few Two-Component Fermions*, Nucl. Phys. **77**, 4, 430-437 (2014).