

## CURRICULUM VITAE

February 2016

### Alexey A. Novoselov

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**Web page:** <http://www.alenov.anynotes.com>, <http://www.ige.unicamp.br/crono/>

**Birth date:** 28.12.1981

**Family status:** married, two children (2002 and 2005)

**Residence:** Campinas, SP, Brazil

**Language skills:** Russian, English, Portuguese

### Current Research Interests

Early Earth environment, Weathering and hydrothermal systems, Geochemical modeling

### Education

Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences, PhD in Geochemistry, 2010.

Thesis title: "The geochemical modeling of the hydrothermal alteration of slow-spreading mid-ocean ridges peridotites".

Lomonosov Moscow State University, Diploma with Honors in Oceanology, 2004.

Thesis title: "The redox conditions of the seawater and oceanic crust interaction in mid-ocean ridges".

### Employment

November 2011 – October 2016

Postdoctoral Researcher, Institute of Geosciences, Campinas State University (Unicamp)

May 2004 – October 2011

Junior Research Scientist, Laboratory of igneous and metamorphic rock geochemistry, Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences

May 2002 – May 2004

Programmer, Laboratory of igneous and metamorphic rock geochemistry, Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences

### Computer Skills

- Delphi (Pascal), Fortran coding (I can study quickly any other computer language)

- Development of Crono software for geochemical simulations
- Deepened knowledge of geochemical modeling software and databases (Phreeqc, FrezChem, Geocheq, Hch, Perple\_X, Supcrt92, Theriak-Domino)
- IBM SPSS Statistics
- Professional graphic design (1 year experience of full day work and 4 years as a freelancer in the commercial company)

### **Completed courses (6)**

November 2015

"Thermodynamic modeling of metamorphic processes" by Dr. Julia Semprich (Germany) in the Institute of Geosciences, Unicamp

September 2013

"Impact Cratering studies" by Prof. Wolf Uwe Reimold (Germany) in the Institute of Geosciences, Unicamp

August 2012 - June 2013

"Portuguese for foreigners. Level III" by Prof. Liliana Gottheim in the Institute of Foreign Languages, Unicamp

November 2012

"PRISM/MICA Software" by Prof. Raymond Kokaly (USA) in the Institute of Geosciences, Unicamp

December 2011

"São Paulo Advanced School of Astrobiology (SPASA 2011)", USP

January 2011

UNHAI 2011 Astrobiology Winter School, University of Hawaii and NASA

### **Expeditions (5)**

June – July 2009

Participation in the SO201-1b cruise of RV "Sonne" (International Project "KALMAR") in Northern Pacific (the northern part of the Hawaii-Emperor Seamount Chain, western Aleutian Arc, Bowers Ridge, and ocean floor and fracture zones between Emperor Chain and western Aleutian trench)

Sampling, description, primary handling (thin sections and others)

March – June 2005

Participation in the 26 cruise of RV "Professor Logachev" in Central Atlantic (Vima trench, Ashadze hydrothermal field)

Sampling, description

January – February 2004

Participation in cruise of RV "Reef" in Black Sea

Sampling, GPS navigation

October – November 2001

Participation in cruise of RV “Groza” in Azov Sea and delta of river Don  
Scientific diving, underwater experiment

January – February 2001

Participation in cruise of RV “Aquanaut” in Black Sea  
Sampling

### **Grants (8)**

8. Principle Investigator, the grant No. 164939/2014-5 of the National Council of Technological and Scientific Development (CNPq), title “Initial history of Terrestrial and Martian atmospheres”, 2014-2016

7. Principle Investigator, the grant No. 2011/12682-3 of the Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP), title “Quantifying the constraints on the environment of early Earth: the cradle for emerging life on a young planet”, 2011-2014

6. Co-Investigator, the program No. 15 of the Presidium of the Russian Academy of Sciences, subprogram 1, theme “The reconstruction of formation conditions of the early Earth’s protocrust and its role in the evolution of the primary atmosphere and hydrosphere composition”, S.A. Silantyev, 2009-2010

5. Co-Investigator, the grant No. 08-05-00164 of the Russian Foundation for Basic Research (RFBR), title “Thermodynamic modeling with kinetic parameters of chemical interactions in the water-rock system”, M.V. Mironenko, 2008

4. Co-Investigator, the program No. 17 of the Presidium of the Russian Academy of Sciences “Fundamental problems of oceanology: physics, geology, biology, and ecology”, section “Interaction between igneous and hydrothermal systems in the oceanic lithosphere and mineral resources”, S.A. Silantyev, 2008

3. Co-Investigator, the program No. 18 of the Presidium of the Russian Academy of Sciences, subprogram 2.1, theme “Reconstruction of forming and composition of Earth’s primary crust and hydrosphere”, S.A. Silantyev, 2004-2008

2. Co-Investigator, the grant No. 06-05-64003 of the Russian Foundation for Basic Research (RFBR), title “Matter balance and phase transformations in the course of hydrothermal alteration of oceanic crust’s ultramafic substratum”, S.A. Silantyev, 2006-2009

1. Co-Investigator, the grant No. 03-05-64018 of the Russian Foundation for Basic Research (RFBR), title “The processes at slow-spreading centers of World Ocean and their influence on lithosphere composition and matter balance in the course of its accretion”, S.A. Silantyev, 2003-2005

### **Honors and Awards (8)**

8. A diploma of the MAIK "SCIENCE/Interperiodika" Press (2012) for the article "Hydrothermal systems of the Hadean ocean and their influence on the matter balance in the crust-hydrosphere-atmosphere system of the early Earth" (Geochemistry International, 2010). Moscow, Russia

7. The best research proposal of SPASA 2011. São Paulo, Brazil  
URL: <http://online.liebertpub.com/doi/pdfplus/10.1089/ast.2013.0987>
6. Awarded a travel grant by the University of Hawaii and NASA to participate in UNHAI 2011 Astrobiology Winter School in Hawaii, USA
5. Awarded a travel grant by the local organizing committee to present an invited talk at the 2010 Astrobiology Graduate Conference in Tallberg, Sweden
4. Awarded a travel grant by the local organizing committee and by the Russian Foundation for Basic Research to present an invited talk at the 2008 Ancient and Modern Oceans Metallogeny Young Scientists School in Miass, Russia
3. Awarded a travel grant by the local organizing committee and by the Russian Foundation for Basic Research to present an invited talk at the 2004 Ancient and Modern Oceans Metallogeny Young Scientists School in Miass, Russia
2. Awarded a travel grant by the local organizing committee and by the Russian Foundation for Basic Research to present an invited talk at the First Siberian International Young Scientist Conference in Earth Sciences (2002) in Novosibirsk, Russia
1. Awarded the first prize of the 2001 Russian Students Oceanology Olympiad organized by the Russian Federation Education Ministry in St. Petersburg, Russia,

### **Talks (31)**

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|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| September 2014 | Potassium metasomatism of Precambrian paleosols // 47° Congresso Brasileiro de Geologia (CBG), 2014, Salvador-Bahia, Brazil                                                                                             |
| December 2013  | Reconstruction of environmental conditions on the Hadean Earth: the cradle for emerging life on a young planet // 1° workshop of postdoctoral researchers of IG, Institute of Geosciences, Unicamp, Campinas-SP, Brazil |
| October 2013   | Quantifying the constraints on the environment of early Earth: the cradle for emerging life on a young planet // A Week of Geological Researches 2013, Unicamp, Campinas-SP, Brazil                                     |
| November 2012  | Early Martian atmosphere // Pre-course ("PRISM/MICA Software" - Raymond Kokaly (USGS)) workshop, 2012. Unicamp, Campinas-SP, Brazil                                                                                     |
| October 2012   | Early Martian atmosphere // 3rd Conference on Terrestrial Mars Analogues, 2012. Marrakech, Morocco                                                                                                                      |
| October 2012   | From cytoplasm to environment: the inorganic ingredients for the origin of Life // EANA 2012. Stockholm, Sweden                                                                                                         |
| September 2012 | Atmospheric composition and climate in the early Precambrian: a comparative analysis of weathering profiles and geochemical simulations // 46° Congresso Brasileiro de Geologia (CBG), 2012, Santos-SP, Brazil          |
| September 2011 | Simulations of the early Earth's subaerial weathering // IGCP-SIDA 599 Project launching meeting and field workshop, Mekrijarvi, Finland                                                                                |
| September 2011 | The composition of early Earth's seawater: results of thermodynamic modeling // COST workshop: Nitrogen in planetary systems, Barcelona, Spain (Contributed talk)                                                       |

- June 2011 Simulation of low-temperature peridotites weathering in Mid-Oceanic Ridges // Russian-Ridge, IGEM RAS, Moscow, Russia
- April 2011 Simulation of the weathering crust forming // XIV International Conference “New Ideas in Earth Sciences”, Section “Physical chemistry of natural ore-forming fluids” (S-XXIX), IGEM RAS, Moscow, Russia
- March 2011 Life in Science // Alumni Seminar of Oceanology Department, Lomonosov University, Moscow, Russia (Invited talk)
- March 2011 Deep-sea hydrothermal vents // Alumni Seminar of Oceanology Department, Lomonosov University, Moscow, Russia (Invited talk)
- January 2011 Quantifying the constraints on the environment of early Earth: the cradle for emerging life on a young planet // NASA-NORDIC Astrobiology Winter School: Water and the Evolution of Life in the Universe, Hilo, Hawaii, USA (Invited poster)
- December 2010 The geochemical modeling of the hydrothermal alteration of slow-spreading mid-ocean ridges peridotites. PhD thesis defense // Dissertation Council D002.109.02, Vernadsky Institute, Moscow, Russia
- December 2010 The geochemical evolution of the protocrust-atmosphere-hydrosphere system in Hadean: results of numerical modeling // Annual Report Symposium of the program No. 15 of the RAS Presidium, Vernadsky Institute, Moscow, Russia
- October 2010 The geochemical modeling of the hydrothermal alteration of slow-spreading mid-ocean ridges peridotites. Materials of PhD dissertation // Integrated Seminar, Vernadsky Institute, Moscow, Russia
- June 2010 Ancient weathering crust-hydrosphere system as environment of prebiotic molecules appearance // AbGradCon 2010, Tallberg, Sweden (Invited talk)
- May 2010 The geochemical modeling of the hydrothermal alteration of slow-spreading mid-ocean ridges peridotites. Materials of PhD dissertation // Seminar of Laboratory of igneous and metamorphic rock geochemistry, Vernadsky Institute, Moscow, Russia
- October 2009 The reasons of the ore matter losing by MOR hydrothermal fluid // XX Russian Young Scientist Conference by name K.O. Kratz, Petrozavodsk, Russia
- June 2009 The redeposition of ore matter in downwelling limb of hydrothermal cell of MOR // Russian-Ridge, St. Petersburg, Russia
- April 2009 Interaction of granite with water at various temperatures. Results of the thermodynamic-kinetic modeling // Annual Seminar of Experimental Mineralogy, Petrology and Geochemistry, Vernadsky Institute, Moscow, Russia
- November 2008 The origin and early evolution of Earth’s atmosphere and hydrosphere // XIX Russian Young Scientist Conference by name K.O. Kratz, Apatity, Russia
- April 2008 The dynamics of the secondary minerals forming by results of the modeling of downwelling limb of a hydrothermal cell at slow-spreading ridges // The Ancient and Modern Oceans Metallogeny - 2008, Miass, Russia (Invited talk)
- October 2007 The thermodynamic modeling of Achaean hydrothermal systems // XVIII Russian Young Scientist Conference by name K.O. Kratz, St. Petersburg, Russia

- June 2007 The thermodynamic modeling of downwelling limb of a hydrothermal cell at slow-spreading ridges with the solid solution data using // Russian-Ridge, Vernadsky Institute, Moscow, Russia
- April 2004 Phase transitions, matter balance and redox conditions in the course of MOR basalt and peridotite interactions with seawater // The Ancient and Modern Oceans Metallogeny – 2004, Miass, Russia (Invited talk)
- April 2003 Phase transitions, matter balance and redox conditions in the course of MOR peridotite-sea water interactions // VI International Conference “New Ideas in Earth Sciences”, Moscow, Russia
- April 2003 Geochemistry of MOR ultramafic rocks – seawater interactions and peculiarities of hydrothermal matter scattering // X International Young Scientist Conference "Lomonosov – 2003". Section of Geography, Lomonosov University, Moscow, Russia
- December 2002 The hydrothermal process at slow-spreading MOR: A thermodynamic modeling study // First Siberian International Young Scientist Conference in Earth Sciences, Novosibirsk, Russia (Invited talk)
- April 2002 The forming of primary hydrothermal fluid at mid-ocean ridges // IX International Young Scientist Conference "Lomonosov – 2002". Section of Geography, Lomonosov University, Moscow, Russia

#### Articles Published in Refereed Journals (11)

11. **A.A. Novoselov**, D. Silva, J. Schneider, P. Serrano, X. C. Abrevaya, M. S. Chaffin, M. S. Navarro, J. Conti, and C.R. de Souza Filho, 2016. New geochemical constraints on the Hadean environment from mineral fingerprints of prokaryotes // Submitted in *Astrobiology*.
10. **A.A. Novoselov**, S. Popov, and C.R. de Souza Filho, 2015. Evaluation of uncertainties in solid-aqueous-gas chemical equilibrium calculations // *Computers & Geosciences* 79, 118–128. DOI: 10.1016/j.cageo.2015.03.012.
9. **A.A. Novoselov**, and C.R. de Souza Filho, 2015. Potassium metasomatism of Precambrian paleosols // *Precambrian Research* 262, 67–83. DOI: 10.1016/j.precamres.2015.02.024.
8. N.A. Alfimova, **A.A. Novoselov**, V.A. Matrenichev, and C.R. de Souza Filho, 2014. Conditions of subaerial weathering of basalts in the Neoproterozoic and Paleoproterozoic // *Precambrian research* 241, 1–16. DOI: 10.1016/j.precamres.2013.09.013.
7. **A.A. Novoselov**, and C.R. de Souza Filho, 2013. CRONO – a code for simulation of chemical weathering // *Computers & Geosciences* 60, 168–175. DOI: 10.1016/j.cageo.2013.07.007.
6. **A.A. Novoselov**, P. Serrano, M.L.A.F. Pacheco, M.S. Chaffin, J.T. O'Malley-James, S.C. Moreno, and F.B. Ribeiro, 2013. From cytoplasm to environment: the inorganic ingredients for the origin of Life // *Astrobiology* 13(3), 294–302. DOI: 10.1089/ast.2012.0836.
5. S.A. Silantyev, **A.A. Novoselov**, E.A. Krasnova, M.V. Portnyagin, F. Hauff, and R. Werner, 2012. Silicification of peridotites from the Stalemate fracture zone, NW Pacific: reconstructions of the low-temperature weathering conditions and the tectonic applications // *Petrology* 20(1), 21–39.

4. S.A. Silantyev, **A.A. Novoselov**, and M.V. Mironenko, 2011. Hydrothermal systems in peridotites at slow-spreading ridges. Modeling phase transformations and material balance: role of gabbroids // *Petrology* 19(3), 217–236.
3. **A.A. Novoselov**, and S.A. Silantyev, 2010. Hydrothermal systems of the Hadean ocean and their influence on the matter balance in the crust - hydrosphere - atmosphere system of the early Earth // *Geochemistry International* 48(7), 643–654.
2. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**, 2009. Hydrothermal systems hosted in peridotites at slow-spreading ridges. Modeling phase transformations and material balance: Upwelling limb of the hydrothermal cell // *Petrology* 17(6), 523–536.
1. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**, 2009. Hydrothermal systems in peridotites of slow-spreading mid-oceanic ridges. Modeling phase transitions and material balance: Downwelling limb of a hydrothermal circulation cell // *Petrology* 17(2), 138–157.

### Reviewed Book Chapters (1)

1. **A.A. Novoselov**, and S.A. Silantyev, 2012. Matter balance in the atmosphere - hydrosphere - crust system of the early Earth // In academician E.M. Galimov (eds.), *Origin and Evolution of Biosphere*, Moscow, Vernadsky Institute, 176–189. Available online at [http://alenov.anynotes.com/My\\_publications/Novoselov, Silantyev\\_Origin and Evolution of Biosphere\\_2012.pdf](http://alenov.anynotes.com/My_publications/Novoselov,_Silantyev_Origin_and_Evolution_of_Biosphere_2012.pdf)

### Conference Outputs (36)

36. **A.A. Novoselov**, S. Popov, C.R. de Souza Filho. Evaluation of uncertainties in solid-aqueous-gas chemical equilibrium calculations // Anais do XV Congresso Brasileiro de Geoquímica, Outubro 2015, Brasília, Brasil [*in Portuguese*]
35. **A.A. Novoselov**, C.R. de Souza Filho. Potassium metasomatism of Precambrian paleosols // Anais do 47º Congresso Brasileiro de Geologia (CBG), Setembro 2014, Salvador-Bahia, Brasil [*in Portuguese*]
34. **A.A. Novoselov**, and C.R. de Souza Filho. Early Martian atmosphere // 3rd Conference on Terrestrial Mars Analogues. Marrakech, Morocco, p. 12
33. **A.A. Novoselov**, P. Serrano, M.L.A.F. Pacheco, M.S. Chaffin, J.T. O'Malley-James, S.C. Moreno, F.B. Ribeiro, and C.R. de Souza Filho. From cytoplasm to environment: the inorganic ingredients for the origin of Life // EANA 2012. Book of abstracts, Stockholm, Sweden, p. 135
32. **A.A. Novoselov**, N.A. Alfimova, and C.R. de Souza Filho. Atmospheric composition and climate in the early Precambrian: a comparative analysis of weathering profiles and geochemical simulations // Anais do 46º Congresso Brasileiro de Geologia (CBG), 2012, Santos-SP, Brazil
31. N.A. Alfimova, and **A.A. Novoselov**. Characteristics of Terrestrial atmosphere in early Precambrian. An approach based on numerical simulations // First Russian Astrobiological School "Astrobiology: From Origin of Life on Earth to Life in Universe", Pushino, Russia, 2012, pp. 146-147

30. M.S. Chaffin, **A.A. Novoselov**, P. Serrano, M.L.A.F. Pacheco, J.T. O'Malley-James, S.C. Moreno, and F.B. Ribeiro. From Environment to Cytoplasm: the Inorganic Ingredients for the Origin of Life // AbSciCon 2012, Atlanta, USA
29. N.A. Alfimova, E.V. Klimova, and **A.A. Novoselov**. Early Precambrian weathering profiles - place for life origin? // SPASA 2011, USP, São Paulo, Brazil, p. 39
28. **A.A. Novoselov**, and C.R. de Souza Filho. The early Earth's environment evolution after magma ocean crystallization // SPASA 2011, USP, São Paulo, Brazil, p. 20
27. **A.A. Novoselov**, and N.A. Alchimova. Simulations of the early Earth's subaerial weathering // IGCP-CIDA 599 Project Launching Meeting and Field Workshop, Mekrijärvi, Finland, September 2011, p. 23
26. **A.A. Novoselov**, and S.A. Silantyev. The composition of early Earth's seawater: the results of thermodynamic modeling // Barcelona Nitrogen Workshop 2011, The Institute for Catalan Studies, Barcelona, Spain, September 2011, pp. 15-17  
URL: <http://ulisse.busoc.be/cost/index.php?action=news2&idarticle=50>
25. **A.A. Novoselov**. Simulation of low-temperature peridotites weathering in Mid-Oceanic Ridges // Russian-Ridge, IGEM RAS, Moscow, Russia, June 2011, pp. 50 - 52
24. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**. Phase transformations and matter balance in serpentinite hosted hydrothermal systems of Slow-Spreading Ridges // Russian-Ridge, IGEM RAS, Moscow, Russia, June 2011, pp. 73-74
23. S. Silantyev, E. Krasnova, M. Portnyagin, **A. Novoselov**. Silicification of peridotites from the Stalemate fracture zone, NW Pacific: tectonic and geochemical applications // Workshop of German-Russian Project KALMAR, Abstract volume, Trier, Germany, 16 – 20 May 2011
22. **A.A. Novoselov**. Simulation of the weathering crust forming // XIV International Conference “New Ideas in Earth Sciences”, Section “Physical chemistry of natural ore-forming fluids” (S-XXIX), Moscow, Russia, April 2011, p. 269
21. **A.A. Novoselov**. The particularities of hot atmospheric gas interaction with surface rocks of early Earth // NASA-NORDIC Astrobiology Winter School: Water and the Evolution of Life in the Universe, Hawaii, USA, 2011, p. 15
20. **A.A. Novoselov**, and S.A. Silantyev. The thermodynamic modeling of the most ancient weathering crust forming // Abstracts of XXI Russian Young Scientist Conference by name K.O. Kratz, St. Petersburg, Russia, 2010, pp. 195 – 198 [*in Russian*]
19. **A.A. Novoselov**, and S.A. Silantyev. Ancient weathering crust-hydrosphere system as environment of prebiotic molecules appearance // AbGradCon 2010, Tallberg, Sweden, 2010, pp. 57 – 58
18. **A.A. Novoselov**. The reasons of the ore matter losing by MOR hydrothermal fluid // Abstracts of XX Russian Young Scientist Conference by name K.O. Kratz, Petrozavodsk, Russia, 2009, pp. 109 - 110 [*in Russian*]
17. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**. Serpentinite hosted hydrothermal systems of mid-ocean ridges: Kinetic and thermodynamic modeling of downwelling limb of a



hydrothermal circulation cell // Goldschmidt Conference Abstracts 2009, Davos, Switzerland, 2009, p. A1222

16. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**. Mineral and chemical transformations in supply canals and discharge zones of serpentinite hosted hydrothermal systems in mid-oceanic ridges // Russian-Ridge, VNIIOkeangeologia, St. Petersburg, Russia, June 2009, pp. 26 - 27

15. **A.A. Novoselov**. The redeposition of ore matter in downwelling limb of hydrothermal cell of MOR // Russian-Ridge, VNIIOkeangeologia, St. Petersburg, Russia, June 2009, pp. 24 - 25

14. **A.A. Novoselov**, and M.V. Mironenko. Interaction of granite with water at various temperatures. Results of the thermodynamic-kinetic modeling // Informational Bulletin of the Annual Seminar of Experimental Mineralogy, Petrology and Geochemistry – 2009, Moscow, Russia, 1 (27), 2009

URL: [http://www.scgis.ru/russian/cp1251/h\\_dgggms/1-2009/informbul-1\\_2009/hydroterm-26e.pdf](http://www.scgis.ru/russian/cp1251/h_dgggms/1-2009/informbul-1_2009/hydroterm-26e.pdf)

13. **A.A. Novoselov**, and S.A. Silantyev. The origin and early evolution of Earth's atmosphere and hydrosphere // Abstracts of XIX Russian Young Scientist Conference by name K.O. Kratz, Apatity, Russia, 2008, pp. 99 - 103 [*in Russian*]

12. S.A. Silantyev, **A.A. Novoselov**, M.V. Mironenko, and E.V. Bibikova. The role of hydrothermal processes in Early Earth's history // Symposium "The Origin and Evolution of Biosphere". Abstracts, Moscow, Russia, 2008, pp. 59 - 60 [*in Russian*]

11. **A.A. Novoselov**, M.V. Mironenko, and S.A. Silantyev. The dynamics of the secondary minerals forming by results of the modeling of downwelling limb of a hydrothermal cell at slow-spreading ridges // The Ancient and Modern Oceans Metallogeny - 2008, Miass, Russia, 2008, pp. 31 - 36 [*in Russian*]

10. **A.A. Novoselov**, M.V. Mironenko, and S.A. Silantyev. The thermodynamic modeling of Achaean hydrothermal systems // Abstracts of XVIII Russian Young Scientist Conference by name K.O. Kratz, St. Petersburg, Russia, 2007, pp. 88 - 90 [*in Russian*]

9. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**. Thermodynamic simulation of peridotite - sea water interactions in serpentinite hosted hydrothermal systems at slow-spreading ridges // Russian-Ridge, GEOKHI, Moscow, Russia, June 2007, pp. 53 - 54

8. **A.A. Novoselov**. The thermodynamic modeling of downwelling limb of a hydrothermal cell at slow-spreading ridges with the solid solution data using // Russian-Ridge, GEOKHI, Moscow, Russia, June 2007, pp. 41 - 42

7. S.A. Silantyev, **A.A. Novoselov**, M.V. Mironenko, and B.V. Belyatsky. Geochemical features and thermodynamic modeling of the hydration and carbonation of MAR residual peridotites from inner corner high's: an example 15°04'N (Bougault diapir) // Russian-Ridge, June 2005, VNIIOkeangeologia, St. Petersburg, Russia, pp. 14 - 15

6. **A.A. Novoselov**. Phase transitions, matter balance and redox conditions in the course of MOR basalt and peridotite interactions with sea water // The Ancient and Modern Oceans Metallogeny – 2004, Miass, Russia, 2004, pp. 52 – 57 [*in Russian*]

5. S.A. Silantyev, **A.A. Novoselov**, M.V. Mironenko, and B.A. Bazylev. The redox conditions of hydration in Hess Crust // Russian-Ridge, Vernadsky Institute, Moscow, Russia, October 2003, p. 81
4. **A.A. Novoselov**, M.V. Mironenko, B.A. Bazylev, and S.A. Silantyev. Phase transitions, matter balance and redox conditions in the course of MOR peridotite-sea water interactions // VI International Conference "New Ideas in Earth Sciences". Abstracts, Vol. 2, Moscow, Russia, 2003, p. 159 [*in Russian*]
3. **A.A. Novoselov**. Geochemistry of MOR ultramafic rocks – sea water interactions and peculiarities of hydrothermal matter scattering // Abstracts of X International Young Scientist Conference "Lomonosov – 2003". Section of Geography, Moscow, Russia, 2003, p. 90 [*in Russian*]
2. **A.A. Novoselov**. The hydrothermal process at slow-spreading MOR: A thermodynamic modeling study // Abstracts of First Siberian International Young Scientist Conference in Earth Sciences, Novosibirsk, Russia, 2002, pp. 113 - 115 [*in Russian*]
1. **A.A. Novoselov**. The primary hydrothermal fluid forming at mid-ocean ridges // Abstracts of IX International Young Scientist Conference "Lomonosov – 2002". Section of Geography, Moscow, Russia, 2002, p. 86 [*in Russian*]

### Research Reports (10)

10. **A.A. Novoselov**. Grant No. 164939/2014-5: Initial history of Terrestrial and Martian atmospheres // CNPq scientific report, Institute of Geosciences, Unicamp, Campinas, Brazil, 2015, 40 p. [*in Portuguese*]
9. **A.A. Novoselov**. Grant No. 2011/12682-3: Quantifying the Constraints on the Environment of Early Earth: the Cradle for Emerging Life on a Young Planet // FAPESP scientific report, Institute of Geosciences, Unicamp, Campinas, Brazil, 2013, 38 p.
8. S.A. Silantyev, and **A.A. Novoselov**. The reconstruction of formation conditions of the early Earth's protocrust and its role in the evolution of the primary atmosphere and hydrosphere composition // The research report of the program No. 15 of the Presidium of the Russian Academy of Sciences, Vernadsky Institute, Moscow, Russia, 2010, 120 p. [*in Russian*]
7. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**. The matter balance and phase transformations in the course of hydrothermal alteration of oceanic crust's ultramafic substratum // The research report of the grant No. 06-05-64003 of the Russian Foundation for Basic Research, Vernadsky Institute, Moscow, Russia, 2009, 120 p. [*in Russian*]
6. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**. The interaction between igneous and hydrothermal systems in the oceanic lithosphere and mineral resources // The research report of the program No. 17 of the Presidium of the Russian Academy of Sciences, Vernadsky Institute, Moscow, Russia, 2008, 120 p. [*in Russian*]
5. S.A. Silantyev, M.V. Mironenko, and **A.A. Novoselov**. The reconstruction of forming and composition of the Earth's primary crust and hydrosphere // The research report of the program No. 18 of the Presidium of the Russian Academy of Sciences, Vernadsky Institute, Moscow, Russia, 2008, 120 p. [*in Russian*]

4. M.V. Mironenko, and **A.A. Novoselov**. Thermodynamic modeling with kinetic parameters of chemical interactions in the water-rock system // The research report of the grant No. 08-05-00164 of the Russian Foundation for Basic Research, Vernadsky Institute, Moscow, Russia, 2008, 120 p. [*in Russian*]
3. S.A. Silantyev, M.V. Mironenko, B.A. Bazilev and **A.A. Novoselov**. The processes at slow-spreading centers of World Ocean and their influence on lithosphere composition and matter balance in the course of its accretion // The research report of the grant No. 03-05-64018 of the Russian Foundation for Basic Research, Vernadsky Institute, Moscow, Russia, 2005, 120 p. [*in Russian*]
2. The investigation of hydro-meteorological conditions of North-East part of Black Sea in winter // Report of the Winter Student Expedition, edited by Prof. V.S. Arkhipkin (**A.A. Novoselov** is one of 19 authors), Department of Oceanology, Lomonosov Moscow State University, Moscow, Russia, 2004, 180 p. [*in Russian*]
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