

PETER I. NABELEK

Personal Data

Department of Geological Sciences
University of Missouri Columbia
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Employment

Professor, University of Missouri, 1995 to present

Associate Professor, University of Missouri, 1989 to 1995

Visiting Scientist, Centre de Recherche sur la Synthèse et la Chimie des Minéraux,
Centre National de la Recherche Scientifique, Orléans, France, 1990/1991

Assistant Professor, University of Missouri, 1983 to 1989

Education:

State University of New York at Stony Brook, Stony Brook, N.Y. August 1978 August 1983. Ph.D. August 1983 in Earth and Space Sciences. Thesis: *Geochemical evolution of the inversely zoned Notch Peak granitic stock, Utah.*

University of Tennessee, Knoxville, TN. September 1977 August 1978. M.S. December 1978. Major in geology. Thesis: *Nucleation and growth of plagioclase and the development of textures in a high-alumina basaltic melt.*

University of Tennessee, Knoxville, TN. September 1973 June 1977. B.A. June 1977 with honors. Major in geology.

Indiana University, Summer Field Camp, July-August, 1978.

Honors and Fellowships:

Fellow of Geological Society of America
Fellow of Mineralogical Society of America

Professional Societies:

Mineralogical Society of America, Geological Society of America, American Geophysical Union

National Service:

Reviewer of 1987, 1989 GSA Meeting Abstracts for the Mineral. Soc. Am.
Organizer of a theme sessions: 1989, 2007 GSA Meeting; 2009 AGU meeting
1990 Mineral. Soc. Am. Speakers Committee
American Mineralogist best paper committee
Min. Soc. Am. best student paper committee at AGU 1999
Associate Editor - *American Mineralogist* (1996-2001)
Editorial Board - *Geology* (1998-2000 and 2001-2003)
Assoc. Editor – *J. of Virtual Exploration* (2002-2012)
NSF Petrology and Geochemistry Panel
Co-organizer of a Penrose Conference (2004)
Publication committee – *J. of Geophysical Research* (2004-2007)
Campus representative for the Geological Society of America (2006-present)
Guest editor - *Geofluids* (2008-2009)
Guest editor - *J. of Geosciences* (2009-2010)

Mineralogical Society of America Fellows Committee (2011-2013; Chair 2013)
Councilor of the Mineralogical Society of America (2015 +)

University Service:

Search Committee for Director of MU Research Reactor
International Studies Program Advisory Committee
College of Arts and Science Planning Council
College of Arts and Science Grade Appeals Committee (twice)
Environmental Studies Review Committee
College of Arts and Science Curriculum, Instruction, and Advising Committee
College of Arts and Science Awards Committee
Faculty Council on University Policy

Courses Taught

Principles of Geology (1100)	Igneous and Metamorphic Petrology (4900)
Environmental Geology (1200)	Radiogenic Isotope Geochemistry (8170)
Volcanology (1400)	Metamorphic Petrology (8140)
Volcanoes & the Human Environment (2160)	Igneous Petrology (8160)

Advising

Graduate students

John Rockhold, M.S.	Ry Stone, M.S.
Wesley McCall, M.S.	Angela Van Boening, M.S.
Timothy Sheehan, M.S.	Jennifer Maloney, M.S.
Craig Schwandt, M.S.	Sarah Stevenson, M.S.
Thomas Pallesen, M.S.	Yanying Chen, M.S.
Deborah Bergfeld, M.S.	Benjamin Gross, M.S.
Kim Ternes, M.S.	Mark Grzovic, M.S.
Jennifer Diestlehorst, M.S.	Ashraf Gafeer, M.S.
Miriam Hart, M.S.	Elizabeth Gammel, M.S.
Mona Sirbescu, Ph.D.	Eric Nowariak, current M.S.
Xianjun Cui, Ph.D.	António Manjón, current M.S.
Cindy Bartlett, M.S.	Yanying Chen, current Ph.D.
Timothy Huff, M.S.	Ashraf Gafeer, current Ph.D.
Joe Hill, Ph.D.	Elizabeth Gammel, current Ph.D.
John Dodds, M.S.	

Past and Present Funded Research:

Chemical fractionation in the Harney Peak granitic intrusion, Black Hills, South Dakota. **Univ. of Missouri Research Council**, Principal Investigator; 1983-1984.

A collaborative geochemical and petrologic study of fluid/rock interaction and mass transfer in a contact metamorphic terrain. **National Science Foundation**, Principal Investigator; 1985-1987.

Geochemical study of aplite petrogenesis as a mirror of fluid evolution in the granitic complex of St. Francois Mountains of southeastern Missouri. **UM Weldon Spring Endowment**, Principal Investigator; 1986-1987.

Acquisition of a stable isotope mass spectrometer facility; **National Science Foundation**; CoPI.

A collaborative geochemical and petrologic study of fluid/rock interaction and mass transfer in a contact metamorphic aureole (renewal). **National Science Foundation**, Principal Investigator; 1988-1989.

The behavior and role of fluids, boron, and fluorine in granitic systems. **Univ. of Missouri Research Council**, Principal Investigator; 1988-1989.

Examination of the role of boron in the petrogenesis of natural granite systems. **National Science Foundation**; Principal Investigator; 1989-1991.

Collaborative geochemical and petrologic study of fluid/rock interaction in the low-pressure metamorphic terrain in Wildrose Canyon, California. **National Science Foundation**; Principal Investigator; 1991-1993.

Exchange kinetics and fractionation of isotopes D/H and $^{18}\text{O}/^{16}\text{O}$ between tourmaline and water. **French National Institute for Sciences of the Universe-National Center for Scientific Research**, Principal Investigator; 1991.

Fractionation of hydrogen isotopes between water and micas. **MU Research Council**; 1994-1995; Principal Investigator.

Petrologic and geochemical study of leucogranite generation: The Black Hills, South Dakota. **National Science Foundation**; 1995-1999; Principal Investigator.

Acquisition of an Inductively-Coupled Plasma Optical Emission Spectrometer Facility at the University of Missouri. **National Science Foundation**; 1997-1998; Co-PI.

Chemistry of Fluids in Granite-Pegmatite Systems. **MU Research Council**; 1997-1999; Principal Investigator.

Toward a constrained hydrodynamic model of contact metamorphism. **National Science Foundation**; 1998-2001; Principal Investigator.

Carbon transport in a faulted metapelite terrane during continental collision. **National Science Foundation**; 2000-2002; Principal Investigator.

Detailed mapping of part of the crystalline core of the Black Hills near Mount Rushmore, South Dakota, **US Geological Survey**, 2001-2003, Co-PI.

Geologic Mapping of Part of The Crystalline Core of The Black Hills, **US Geological Survey**; Co-PI, 2000-2001.

Geology of a Continental Collision. **MU Research Council**; 2001-2003; Principal Investigator.

Numerical Modeling of Reaction-Enhanced Fluid Flow and Isotopic Exchange in Contact Aureoles. **National Science Foundation**; 2004-2007, Principal Investigator.

Collaborative Research: Measurement of transport properties of silicate melts, with applications to crustal anatexis. **National Science Foundation**; 2005-2007, Co-PI.

Lithium Isotopes as Tracers of Granite Petrogenesis. **MU Research Council**; 2005, PI

Collaborative Research: Investigation of the effects of $\text{CO}_2\text{-H}_2\text{O}$ fluids on the deformation of quartzite and marble in the EJB aureole, California. **National Science Foundation**; 2007-2010, PI.

Basaltic magmatism and metamorphism in the Canadian Arctic. **MU Research Council**; 2009-2010, PI.

Collaborative Research: Incorporating temperature-dependent physical properties into numerical models of magmatic and related hydrothermal systems; **National Science Foundation**; 2009-2013., PI.

Deep-crustal reactive fluid flow in the Mesozoic White-Inyo magmatic arc, California, **National Science Foundation**; 2013-2016., PI.

PUBLICATIONS

Papers:

1. **Nabelek, P. I.**, Taylor, L. A. and Lofgren, G. E. (1978) Nucleation and growth of plagioclase and the development of textures in a high-alumina basaltic melt. Proc. Lunar Planet. Sci. Conf. 9th, 715-741.
2. **Nabelek, P. I.** (1980) Nickel partitioning between olivine and liquid in natural basalts: Henry's Law behavior. Earth Planet. Sci. Lett., 48, 293-301.
3. **Nabelek, P. I.** (1981) Nickel partitioning between olivine and liquid in natural basalts: Henry's Law behavior, Reply to B. O. Mysen. Earth Planet. Sci. Lett., 52, 225-226.
4. **Nabelek, P. I.**, O'Neil, J. R. and Papike, J. J. (1983) Vapor phase exsolution as a controlling factor in hydrogen isotope variation in granitic magmas: The Notch Peak granitic stock, Utah. Earth Planet. Sci. Lett., 66, 137-150.
5. **Nabelek, P. I.**, Labotka, T. C., O'Neil, J. R. and Papike, J. J. (1984) Contrasting fluid/rock interaction between the Notch Peak granitic intrusion and argillites and limestones in Western Utah: Evidence from stable isotopes and phase assemblages. Contrib. Mineral. Petrol., 86, 25-34.
6. **Nabelek, P. I.**, (1986) Trace element modeling of the petrogenesis of granophyres and aplites in the Notch Peak granitic stock, Utah., Am. Mineral., 71, 460-471.
7. **Nabelek, P. I. and** Langmuir, C. H. (1986) The significance of unusual zoning in olivines from FAMOUS area basalt 527-1-1. Contrib. Mineral. Petrol., 93, 1-8.
8. Glascock, M. D., **Nabelek, P. I.**, Weinrich, D. D., Coveney, R. M. (1986) Correcting for uranium fission in instrumental neutron activation analysis of high-uranium rocks. J. Radioanal. Nucl. Chem., 99, 121-131.
9. **Nabelek, P. I.**, Papike, J. J. and Laul, J. C. (1986) The Notch Peak granitic stock, Utah: Origin of reverse zoning and petrogenesis, J. Petrol., 27, 1035-1069.
10. Rockhold, J. R., **Nabelek, P. I. and** Glascock, M. D. (1987) Origin of rhythmic layering in the Calamity Peak satellite pluton of the Harney Peak Granite, South Dakota: The role of boron. Geochim. Cosmochim. Acta, 51, 487-496
11. Himmelberg, G. R., Loney, R. A. and **Nabelek, P. I.** (1987) Petrogenesis of gabbro-norite at Yakobi and northwest Chichagof Islands, Alaska. Geol. Soc. Am. Bull, 98, 265-279.

12. **Nabelek, P. I.**, Lindsley, D. H. and Bohlen, S. R. (1987) Experimental examination of two-pyroxene graphical geothermometers using natural pyroxenes with application to metaigneous pyroxenes from the Adirondack Mountains, New York. *Contrib. Mineral. Petrol.*, 97, 66-71.
13. **Nabelek, P. I.** (1987) General equations for modeling fluid/rock interaction using trace elements and isotopes. *Geochim. Cosmochim. Acta*, 51, 1765-1769.
14. Pallesen, T. J., **Nabelek, P. I.** and Glascock, M. D. (1988) Compositional and textural zonation in the Silvermine granite, Missouri: The role of liquid fractionation and K-metasomatism in the formation of a W-Sn deposit. In: *Proc. N. Am. Cont. Tecton. Control Ore Depos.*, (G. Kisvarsanyi, S. Grant, eds.), 346-357.
15. **Nabelek, P. I.**, Hanson, G. N., Labotka, T. C. and Papike, J. J. (1988) Effects of fluids on the interaction of granites with limestones: The Notch Peak stock, Utah. *Contrib. Mineral. Petrol.*, 99, 49-61.
16. Labotka, T. C., **Nabelek, P. I.**, Papike, J. J., Hover-Granath, V. and Laul, J. C. (1988) Effects of contact metamorphism on the chemistry of the calcareous rocks in the Big Horse limestone, Notch Peak, Utah. *Am. Mineral.*, 73, 1095-1110.
17. Labotka, T. C., **Nabelek, P. I.** and Papike, J. J. (1988) Fluid infiltration through the Big Horse Limestone in the Notch Peak contact-metamorphic aureole, Utah. *Am. Mineral.*, 73, 1302-1324
18. **Nabelek, P. I.** and Russ-Nabelek, C. (1990) The role of fluorine in the petrogenesis of magmatic segregations in the St. Francois volcano-plutonic terrane, southeastern Missouri. In H. J. Stein and J. L. Hanna, eds., *Ore-bearing Granite Systems: Petrogenesis and Mineralizing Processes: Geol. Soc. Am. Spec. Pap.* 246, 71-87.
19. McCall, G. W., **Nabelek, P. I.**, Bauer, R. L. and Glascock, M. D. (1990) Petrogenesis Archean lamprophyres in southern Vermilion Granitic Complex, northeastern Minnesota, with implications for the nature of their mantle source. *Contrib. Mineral. Petrol.*, 90, 439-452.
20. **Nabelek, P. I.**, Denison, J. R. and Glascock, M. D. (1990) Behavior of boron during contact metamorphism of calc-silicate rocks at Notch Peak, Utah. *Am. Mineral.* 75, 874-880.
21. **Nabelek, P. I.** (1991) Stable Isotope Monitors, In: *Contact Metamorphism*, (D. Kerrick, ed.), *Reviews in Mineralogy* 25, 395-435.
22. **Nabelek, P. I.**, Labotka, T. C. and Russ-Nabelek, C. (1992) Stable isotope evidence for the role of diffusion, infiltration and local structure on contact metamorphism of calc-silicate rocks at Notch Peak, Utah. *Journal of Petrology*, 33, 557-583.
23. **Nabelek, P. I.**, Russ-Nabelek, C. and Denison, J. R. (1992) The generation and crystallization conditions of the Proterozoic Harney Peak leucogranite, Black Hills, South Dakota, USA: Petrologic and Geochemical Constraints. *Contrib. Mineral. Petrol.*, 110, 173-191.
24. **Nabelek, P. I.**, Russ-Nabelek, C. and Haeussler, G. T. (1992) Stable isotope evidence for the petrogenesis and fluid evolution in the Proterozoic Harney Peak leucogranite, Black Hills, South Dakota. *Geochim. Cosmochim. Acta.*, 56, 403-417.
25. Krogstad, E. J., Walker, R. J., **Nabelek, P. I.** and Russ-Nabelek, C. (1993) Pb isotopic evidence for mixed sources for Proterozoic granites and pegmatites, Black Hills, South Dakota. *Geochim. Cosmochim. Acta*, 57, 4677-4685.
26. **Nabelek, P. I.** and Labotka, T. C. (1993) Implications of geochemical fronts in the Notch Peak contact metamorphic aureole, Utah, USA. *Earth Planet Sci. Lett.*, 119, 539-559

27. **Nabelek, P. I.** and Glascock, M. D. (1995) Rare earth element-depleted leucogranites in Black Hills, South Dakota: A consequence of disequilibrium melting of monazite-bearing schists. *J. Petrology*, 36, 1055-1071.
28. Bergfeld, D., **Nabelek, P. I.** and Labotka, T. C. (1996) Carbon isotope exchange during regional polymetamorphism in the Panamint Mountains, California. *J. Metamorphic Geology*, 14, 199-212.
29. Kohút, M. and **Nabelek, P. I.** (1996) Sources of the Velká Fatra granitoid rocks, Slovakia - Isotopic constraints or contradiction? *Polish Mineral. Soc. Spec. Pub.* 7, 47-50
30. Gosselin, D. C., **Nabelek, P. I.**, Peterman, Z. E. and Sibray, S. (1997) A reconnaissance study of oxygen, hydrogen and strontium isotopes in geochemically diverse lakes, Western Nebraska, USA. *J. Paleolimn.*, 17, 51-65.
31. **Nabelek, P. I.** and Ternes, K. (1997) Fluid inclusions in the Harney Peak Granite, Black Hills, South Dakota, USA: Implications for solubility and evolution of magmatic volatiles and crystallization of leucogranite magmas. *Geochim. Cosmochim. Acta*, 61, 1447-1465
32. **Nabelek, P. I.** (1997) Quartz-sillimanite leucosomes in high-grade schists, Black Hills, South Dakota: A perspective on the mobility of Al in high-grade metamorphic rocks. *Geology*, 25, 995-998.
33. **Nabelek, P. I.** and Bartlett, C. D. (1998) Petrologic and geochemical links between the Proterozoic Harney Peak leucogranite, South Dakota, USA and its source rocks. *Lithos*, 45, 71-85.
34. **Nabelek, P. I.**, Bartlett, C. and Glascock, M. (1999) Can trace element distributions in migmatites be used as analogues for granite petrogenesis? *Phys. Chem. Earth (A)*, 24, 295-298.
35. **Nabelek, P. I.** and Liu, M. (1999) Leucogranites in the Black Hills of South Dakota: The consequence of shear heating during continental collision. *Geology*, 27, 523-526.
36. Kohút, M., Poller, U., Todt, W., **Nabelek, P.** and Janák, M. (1999) Na-rich and high-Al granitoid magma in the Tatra Mts. (western Carpathians, Slovakia) -melting of the amphibolitic lower crust. *Geol. Carpathica*, 50, 107-109.
37. **Nabelek, P. I.** (1999) Trace element distribution among rock-forming minerals in Black Hills migmatites, South Dakota: A case for solid-state equilibrium. *Am. Mineral.* 1256-1269.
38. **Nabelek, P.**, Sirbescu, M. and Liu, M. (1999) Petrogenesis and tectonic context of the Harney Peak Granite, Black Hills, South Dakota. *Rocky Mountain Geol.*, 34, 165-181.
39. Labotka, T. C., Bergfeld, D. and **Nabelek, P. I.** (2000) Comment on: Two diamictites, two cap carbonates, two $\delta^{13}\text{C}$ excursions, two rifts: The Neoproterozoic Kinston Peak Formation, Death Valley, California. *Geology*, 28, 191-192.
40. Pennisi, M., Leeman, W. P., Tonarini, S. Pennisi, A. and **Nabelek, P.** (2000) Boron, Sr, O and H isotope geochemistry of groundwaters from Mt. Etna (Sicily) – hydrologic implications, *Geochim. Cosmochim. Acta*, 64, 961-974.
41. **Nabelek, P. I.** and Bartlett, C. (2000) Fertility of metapelites and metagraywackes during leucogranite generation: An example from the Black Hills, USA. *Trans. R. Soc. Edinburgh: Earth Sci.*, 91, 1-14.

42. Cui, X., **Nabelek, P. I.** and Liu, M. (2001) Heat and fluid flow in contact metamorphic aureoles with layered and transient permeability, with application to the Notch Peak aureole, Utah. *J. Geophysical Research*, 106, 6477-6491.
43. **Nabelek, P. I.**, Liu, M. and Sirbescu, M. (2001) Thermo-rheological, shear-heating model for leucogranite generation, metamorphism and deformation during the Proterozoic Trans-Hudson orogeny, Black Hills, South Dakota. *Tectonophysics*, 342, 371-388.
44. Kohút, M., **Nabelek, P.** and Recio, C., 2001: Stable Isotopes of Western Carpathian Granitoids. Chapter 2.2.4, In: Petrík, I., Kohút, M. & Broska, I., (Eds) *Granitic Plutonism of the Western Carpathians*, Monograph, pp. 33-35.
45. Kohút, M., **Nabelek, P.**, Poller, U., Recio, C. & Todt, W., 2001: The Velka Fatra Mountains: A Variscan Composite Granite Massif with Long Tectonic and Granite Evolution. In: Petrík, I., Kohút, M. & Broska, I., (Eds) *Granitic Plutonism of the Western Carpathians*, Monograph, pp. 72-76.
46. **Nabelek, P. I.** (2002) Calc-silicate reactions and bedding-controlled isotopic exchange in the Notch Peak aureole, Utah: Implications for differential fluid fluxes with metamorphic grade. *J. Metamorphic Geol.*, 20, 429-440.
47. Cui, X., **Nabelek, P. I.** and Liu, M. (2002) Fluid flow and oxygen isotope exchange in the Notch Peak contact metamorphic aureole: Insights from two-dimensional numerical modeling. *Geological Society of American Bulletin*, 114, 689-882.
48. Wilke, M., **Nabelek, P. I.**, and Glascock, M. D. (2002) B and Li in metapelites from the Proterozoic Terrane in the Black Hills, South Dakota, USA: Implications for the origin of leucogranitic magmas. *American Mineralogist*, 87, 491-500.
49. Petrík, I., **Nabelek, P.I.**, Janák, M., and Plašienka, D. (2003) Conditions of formation and crystallization kinetics of highly oxidized pseudotachylytes from the High Tatras (Slovakia). *Journal of Petrology*, 44, 901-927.
50. Sirbescu, M.-L. C. and **Nabelek, P.I.** (2003) Dawsonite: an inclusion mineral in quartz from the Tin Mountain pegmatite, Black Hills, South Dakota. *American Mineralogist*, 88, 1055-1060.
51. Sirbescu, M.-L. C. and **Nabelek, P.I.** (2003) Crystallization conditions and evolution of magmatic fluids in the Harney Peak Granite and associated pegmatites, Black Hills, South Dakota -Evidence from fluid inclusions. *Geochim. Cosmochim. Acta*, 67, 2443-2465.
52. Sirbescu, M.-L. C. and **Nabelek, P.I.** (2003) Crustal melts below 400 °C. *Geology*, 31, 685-688.
53. Cui, X., **Nabelek, P. I.** and Liu, M. (2003) Reactive flow of mixed CO₂-H₂O fluid and progress of calc-silicate reactions in contact metamorphic aureoles: insights from two-dimensional numerical modeling. *Journal of Metamorphic Geology*, 21, 663-684.
54. **Nabelek, P.I.** and Liu, M. (2004) Petrologic and thermal constraints on the origin of leucogranites in collisional orogens. *Trans. R. Soc. Edinburgh: Earth Sci.*, 95, 73-85.
55. **Nabelek, P.I.**, Labotka, T.C., Helms, T., and Wilke, M. (2006) Fluid-mediated polymetamorphism related to Proterozoic collision of Archean Wyoming and Superior provinces in the Black Hills, South Dakota. *Am. Mineral.*, 91, 1473-1487.

56. Huff, T. A. and **Nabelek, P.I.** (2007) Production of carbonic fluids during metamorphism of graphitic pelites in a collisional orogen – An assessment from fluid inclusions. *Geochim. Cosmochim. Acta.*, 71, 4997-5015.
57. **Nabelek, P.I.** (2007) Fluid evolution and kinetics of metamorphic reactions in calc-silicate contact aureoles—from H₂O to CO₂ and back. *Geology*. 35, 927-930.
58. Maloney, J.S., **Nabelek, P.I.**, Sirbescu, M.C., and Halama, R. (2008) Lithium and its isotopes in tourmaline as indicators of the crystallization process in the San Diego County pegmatites, California, USA. *European Journal of Mineralogy*, 20, 905-916.
59. Van Boening, A.M. and **Nabelek, P.I.** (2008) Petrogenesis and tectonic implications of Paleoproterozoic mafic rocks in the Black Hills, South Dakota. *Precambrian Research*, 167, 363-376.
60. Kohút, M. and **Nabelek, P.I.** (2008) Geochemical and isotopic (Sr, Nd and O) constraints on sources of Variscan granites in the Western Carpathians – implications for crustal structure and tectonics. *Journal of Geosciences*, 53, 307-322.
61. Whittington, A.G., Hofmeister, A.M., and **Nabelek, P.I.** (2009) Temperature-dependent thermal diffusivity of Earth's crust and implications for magmatism. *Nature*, 458, 319-321.
62. Appold, M.S. and **Nabelek, P.I.** (2009) Introduction to the special issue on numerical modeling of hydrothermal fluids. *Geofluids*, 9, 77-84.
63. **Nabelek P.I.** (2009) Numerical simulation of kinetically-controlled calc-silicate reactions and fluid flow with transient permeability around crystallizing plutons. *Am. J. Science*, 309, 517-548.
64. **Nabelek, P.I.**, Whittington, A.G., and Sirbescu, M.C. (2010) The role of H₂O in rapid emplacement and crystallization of granite pegmatites: resolving the paradox of large crystals in highly undercooled melts. *Contrib. Mineral. Petrol.*, 160, 1-13. doi:10.1007/s00410-009-0479-1.
65. **Nabelek, P.I.**, Whittington, A.G., and Hofmeister, A. (2010) Strain-heating as a mechanism for partial melting and UHT metamorphism in convergent orogens: Implications of temperature-dependent diffusivity and rheology. *J. Geophys. Res.*, 115, B12417, doi:10.1029/2010JB007727
66. **Nabelek, P.I.** and Morgan, S.S. (2012) Metamorphism and fluid flow in the contact aureole of the Eureka Valley-Joshua Flat-Bear Creek Pluton, California. *Bull. Geol. Soc. Am.*, 124, 228-239.
67. **Nabelek, P.I.**, Hofmeister, A.M., and Whittington, A.G. (2012) The influence of temperature-dependent thermal diffusivity on the conductive cooling rates of plutons and temperature-time paths in contact aureoles. *Earth Planet. Sci. Lett.*, 317-318, 157-164.
68. Bédard, J.H., Naslund, H.R., **Nabelek, P.**, Winpenny, A., Hryciuk, M., Macdonald, W., Hayes, B., Steigerwaldt, K., Hadlari, T., Rainbird, R., Dewing, K., and Girard, E. (2012) Fault-mediated melt ascent in a Neoproterozoic continental flood basalt province, the Franklin sills, Victoria Island, Canada. *Bull. Geol. Soc. Am.*, 124, 723-736
69. Romine, W.L., Whittington, A.G., **Nabelek, P.I.** and Hofmeister, A.M. (2012) Thermal diffusivity of rhyolitic glasses and melts: effects of temperature, crystals and dissolved water. *Bull. Volcanol.*, 74, 2273-2287.

70. Telus, M., Dauphas, N., Moynier, F., Tissot, F.L.H., Teng, F.-Z., **Nabelek, P.I.**, Craddock, P.R. and Groat, L.A. (2012) Iron, zinc, magnesium and uranium isotopic fractionation during continental crust differentiation: The tale from migmatites, granitoids, and pegmatites. *Geochim. Cosmochim. Acta*, 97, 247-265.
71. **Nabelek, P.I.**, Bédard, J.H., Hryciuk, M. and Hayes, B. (2013) Short-duration contact metamorphism of calcareous sedimentary rocks by Neoproterozoic Franklin gabbro sills and dykes on Victoria Island, Canada. *Journal of Metamorphic Geology*, 31, 205-220.
72. Merriman, J.D., Whittington, A.G., Hofmeister, A.M., **Nabelek, P.I.**, and Benn, K. (2013) Thermal transport properties of major Archean rock types to high temperature and implications for cratonic geotherms. *Precambrian Research*, 233, 358-372.
73. **Nabelek, P.I.**, and Chen, Y. (2014) The initial garnet-in reaction involving siderite-rhodochrosite, garnet re-equilibration and - - paths of graphitic schists in the Black Hills orogen, South Dakota, USA: *Journal of Metamorphic Geology*, 32, 133–150.
74. **Nabelek, P.I.**, Bédard, J.H., and Rainbird, R.H. (2014) Numerical constraints on degassing of metamorphic CO₂ during the Neoproterozoic Franklin large igneous event, Arctic Canada: *Geological Society of America Bulletin*, 126, 759–772.
75. **Nábělek, P.I.**, and Nábělek, J.L. (2014) Thermal characteristics of the Main Himalaya Thrust and the Indian lower crust with implications for crustal rheology and partial melting in the Himalaya orogen: *Earth and Planetary Science Letters*, 395, 116–123.
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