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Curriculum Vitae, Scientific carrier and publications

1. Scientific CV

Name: **Theodoros Ntaflos** (H-index 14)

Associate Prof. University of Vienna

Born 04.04.1952 in Ioannina, Greece

Marital status: Married

Children: two

1976: Diploma in Geology, University of Athens Greece.

1982: PhD degree at the University of Vienna with Theme "The metamorphic conditions of metapelites from Deffergger Alps, East-Tyrol, Austria".

1983-1986: PostDoc fellowship at the Museum of Natural History Vienna, Austria.

1984: Fellowship at the Max Planck Institute, Dep. of Cosmochemistry, Germany.

1987-1988: FWF-Schrödinger Fellowship at the University of New Mexico, Dept. of Geology, Institute of Meteoritics, USA.

1989-1990: Dept. of Geochemistry at the Geotechnical Institute Arsenal, Vienna, Austria

1990-2006 Assistant Professor at the Dep. of Lithospheric Research (former Institute of Petrology), University of Vienna, Austria

Since 2007 Associate Professor at the Dept. of Lithospheric Research, University of Vienna, Austria.

Collaborations

Russia

1. With Vernadsky Institute Moscow, Russia studying:
 - a. Meteorites
 - b. Geochemical and petrological processes in the lithospheric mantle
2. With Russian Academy of Science, IGEM-Moscow Russia:
 - a. Geochemical and petrological processes in the lithospheric mantle
 - b. The origin of Picrites in Siberian Flood Basalts.
3. With Russian Academy of Science Magadan, Russia
 - a. Geochemical and petrological processes in the lithospheric mantle
 - b. Magma generation in the Bering Sea Basaltic Province
4. With Russian Academy of Science, Novosibirsk
 - a. on-craton lithospheric mantle using mantle xenoliths in Kimberlites

Romania

1. With Romanian Academy of Sciences studying
The origin of Lamproites in the Pannonian Basin: Award of the Romanian Academy of Science as the best publication in 2010.

Hungary

1. With the University of Eotvös University of Budapest studying
Basaltic magma generation in the Pannonian Basin

Poland

1. With University of Wroclaw studying
The geochemistry and petrology of the lithospheric mantle beneath S. Poland.

Italy

1. With University of Ferrara studying
Geochemical, petrological and metasomatic processes in the lithospheric Earth Mantle

Argentina

1. With University of Bahia Blanca studying
The evolution of the lithospheric mantle beneath Patagonia

USA

1. With University of S. Carolina studying Sr, Nd, Pb and Hf isotopes in basalts and mantle xenoliths.

Reviewer for the following Earth Sciences Journals:

Journal of Petrology

Geology

Lithos

Contributions to Mineralogy and Petrology

Geostandard and Geoanalytical Research

Mineralogy and Petrology

Geological Society of London, Special Publications

Tectonophysics

Geological Society of America, Special Papers

Terra Nova

Central European Journal of Geosciences.

Reviewer of PhD thesis in

1. Hungary
2. Italy
3. Argentina
4. Vienna

Reviewer for scientific Funds:

1. OTKA EPR Hungary
2. COFIN, Italy
3. Swiss National Science Foundation
4. Coordinator of the evaluation committee for the external evaluation of the Department of Mineral Resources Engineering of the Technical University of Crete
5. Coordinator of the evaluation committee for the external evaluation of the Department of Geology, University of Patras.

Visibility

Member of the

European Association of Geochemistry

American Geophysical Union

Conferences

1. Since 2010, convener at the EGU sessions about the evolution of the continental lithospheric mantle.
2. Convener at the PANGEO conference 2009 about the magma generation in the Pannonian Basin.
3. Convener at the Geological, Balkan, Carpathian Association, 2010, Thesaloniki

Interviews in newspaper

1. Kurier, about the Vesuvius Volcano
2. "Die Presse", about the Buddha from space , Chinga iron meteorite
3. Article about the evolution of Patagonia in "Forschungsnewsletter" vol. 39 published also in:
 - a) "uni-protokolle.de": <http://www.uni-protokolle.de/nachrichten/id/180695/>
 - b) "innovations-report.de": http://www.innovations-report.de/html/berichte/geowissenschaften/nord_patagonien_quot_schnappschuss_quot_erdinneren_135488.html
 - c) "juraforum.de": <http://www.juraforum.de/jura/news/news/p/1/id/288767/f/196/>
 - d) "zukunftwissen.apa.at": http://www.zukunftwissen.apa.at/cms/zukunft-wissen/fti-und-wissenschaft/meldung.html;jsessionid=aS92TqfF9nf5?id=ZUK_20090708_ZUK0048
 - e) „scinexx.de“: <http://www.scinexx.de/wissen-aktuell-10167-2009-07-09.html>

Interviews in TV and Radio

Interviews about the Eruption of the volcano Eyjafjallayökul 2010

1. TV- station PULS 4
2. Radio station "Radio Wien"
3. Radio Station "Krone Hitradio", Vienna
4. Radiostation "Radio Energy", Vienna
5. Radiostation "Arabella", Vienna
4. Article in Book "Die Mineralien des Burgenlandes. Geologie, Mineralogie und mineralische Rohstoffe", Landesmuseum Burgenland, Eisenstadt, p 170-175

PhD Students

Three students finished their PhD under my supervision and one is working on.

Master Students

Currently I am supervising five MSc-Students

Postdoc

Two Postdocs have been financed from my grants.

2. Participation in Conferences

I am participating regularly to the EGU and Goldschmidt Conferences that take place every year giving talks or presenting posters

I am the author and co-author of over 200 abstracts.

I gave invited talks at the University of Bristol, UK, University of Graz, Austria, University of Wroclaw, Poland, University of Thessaloniki, Greece, and University of Bahia Blanca, Argentina.

3. Main Scientific interests

The main scientific interests are focused in the geochemical and petrological processes taking places in the mantle lithosphere and in the asthenosphere.

The mantle xenoliths enable the study of partial melting and percolation of melt/fluids in the lithosphere. In particular xenoliths are the only samples of lithospheric mantle available beneath many areas.

Mantle xenoliths provide “snapshots” of the lithospheric mantle beneath particular regions at the time of their entrainment in the basalts and because they are erupted very fast, no time for extended interaction with their host basalts or between constituent minerals, they freeze in the mineralogical and chemical signatures of their depth of origin.

The estimation of the P-T conditions that occur in the depth, the quantification of the degree of depletion after extraction of melts and the nature of percolating melt/fluids as well as their quantification are main tasks in order to contribute towards understanding the evolution of the lithospheric mantle.

Most of the basaltic magmas are generated in the asthenosphere. The physicochemical conditions and the geodynamic environment under which primary magmas generated the propagation to the surface and the magma chamber processes are part of the main scientific interests-

Using petrological and geochemical techniques, like Electron Probe Microanalyzer, ICP-MS and XRF in collaboration with archaeologists and within the frame of interdisciplinary FWF-project the provenance of the source material and the study of manufacturing technologies belong to the scientific interests during the last years.

To the main field of interests belongs the study of meteorites from petrological and geochemical point of view.

Major current scientific activities:

1. A three year (2009-2012) FWF (the Austrian Scientific Fund) –project on the geochemical and petrological evolution of NE-Russia an area that has been affected by an old subduction of the Pacific plate.
2. A three year (2011-2014) FWF (the Austrian Scientific Fund) –project on the geochemical and petrological evolution of the lithospheric mantle underneath Patagonia, Argentina.
3. Within the frame of an IK (initiative college) project, 2010-2013, the determination of the concentration of P and its distribution in olivine, pyroxene and metal of various meteorites (ordinary chondrites, IAB iron meteorites, acapulcoites, winonaites, pallasites) and how P has been introduced in the silicate minerals in chondrules.
4. The evolution of the Pannonian Basin, under the given geodynamic setting and the magma generation conditions and the nature of the lithospheric mantle underneath this area.

4. Projects since 2000

1. FWF Project 2011-2014, volume € 160,000
2. FWF Project 2009-2012, volume €240,000
3. IGCP Project 2008-2010, € 12,000
4. OEAW Project 2009-2011, €7,000
5. OEAD Project with Poland 2008-2009, volume € 6,000
6. OEAD Project with Russia, 2004-2005, volume € 6,000
7. Action Austria-Hungary, 2005, volume € 9,000
8. Action Austria-Hungary, 2006, volume € 7,000
9. IGCP-Project 2003-2005, volume € 12,000
10. OEAD Project with Poland 2010-2011, volume € 6,000
11. OEAD Project with France 2011-2012, volume € 6,000
12. OEAD Project with Russia 2001-2002, volume € 6,000

5. Teaching responsibilities

1. Every year: two courses on Petrology
2. Every two years: Volcanology
3. Every year: Petrography
4. Every year: Instrumental Methods II (Electron Probe Microanalyzer and Scanning Electron Microscopy)
5. University of Ferrara, Italy 2004: Guestprofessor, teaching Mantle Petrology and Geochemistry
6. University of Eotvös Budapest Hungary: 2005 Guestprofessor, teaching Mantle Petrology and Geochemistry

7. University of Bahia Blanca, Argentina: 2006 Guestprofessor, teaching Mantle Petrology and Geochemistry
8. University Bahia Blanca, Argentina; 2010 Guestprofessor, teaching magmatic Petrology and Geochemistry
9. University of Wroclaw, Poland: Guestprofessor, teaching Mantle Petrology and Geochemistry

Supervisor of PhD theses in:

1. archaeometry
2. magmatic petrology and geochemistry
3. Meteorites
4. Mantle petrology and geochemistry

Co-supervisor in PhD thesis at the university of Bahia Blanca Argentina and at the University of Ferrara, Italy

Supervised 12 Master Thesis in petrology and geochemistry

6. Publications

1. Ali, S., **Ntaflos, T.** & Upton, B. G. J. (2012) Petrogenesis and mantle source characteristics of Quaternary alkaline mafic lavas in the western Carpathian–Pannonian Region, Styria, Austria. *Chemical Geology*, <http://dx.doi.org/10.1016/j.chemgeo.2012.12.001>
2. Buchner, E., Schmieder, M., Kurat, G., Brandstätter, F., Kramar, U., **Ntaflos, T.** & Kröcher, J. (2012). Buddha from space—An ancient object of art made of a Chinga iron meteorite fragment*. *Meteoritics & Planetary Science* **47**, 1491-1501.
3. Czuppon, G., Lukács, R., Harangi, S., Mason, P. R. D. & **Ntaflos, T.** (2012). Mixing of crystal mushes and melts in the genesis of the Bogács Ignimbrite suite, northern Hungary: An integrated geochemical investigation of mineral phases and glasses. *Lithos* **148**, 71-85.
4. Drost, K., Wirth, R., Košler, J., Fonneland Jørgensen, H. & **Ntaflos, T.** (2012). Chemical and structural relations of epitaxial xenotime and zircon substratum in sedimentary and hydrothermal environments: a TEM study. *Contributions to Mineralogy and Petrology*, 1-20.
5. Jankovics, M. É., Harangi, S., Kiss, B. & **Ntaflos, T.** (2012). Open-system evolution of the Füzes-tó alkaline basaltic magma, western Pannonian Basin: Constraints from mineral textures and compositions. *Lithos* **140–141**, 25-37.
6. Koutsovitis, P., Magganas, A. & **Ntaflos, T.** (2012). Rift and intra-oceanic subduction signatures in the Western Tethys during the Triassic: The case of ultramafic lavas as part of an unusual ultramafic–mafic–felsic suite in Othris, Greece. *Lithos* **144–145**, 177-193.
7. Nazarov, M. A., Demidova, S. I., Anosova, M. O., Kostitsyn, Y. A., **Ntaflos, T.** & Brandstaetter, F. (2012). Native silicon and iron silicides in the Dhofar 280 lunar meteorite. *Petrology* **20**, 506-519.
8. Puziewicz, J., Koepke, J., Grégoire, M., **Ntaflos, T.** & Matusiak-Małek, M. (2011). Lithospheric Mantle Modification during Cenozoic Rifting in Central Europe: Evidence from the Księginki Nephelinite (SW Poland) Xenolith Suite. *Journal of Petrology* **52**, 2107-2145.

9. Tscheegg, C., Bizimis, M., Schneider, D., Akinin, V. V. & **Ntaflos, T.** (2011). Magmatism at the Eurasian–North American modern plate boundary: Constraints from alkaline volcanism in the Chersky Belt (Yakutia). *Lithos* **125**, 825-835.
10. Tscheegg, C., **Ntaflos, T.**, Akinin, V. & Hauzenberger, C. (2012). Carbonate-rich melt infiltration in peridotite xenoliths from the Eurasian–North American modern plate boundary (Chersky Range, Yakutia). *Contributions to Mineralogy and Petrology* **164**, 441-455.
11. Tscheegg C, **Ntaflos T**, Akinin VV (2011) Polybaric petrogenesis of Neogene alkaline magmas in an extensional tectonic environment: Viliga Volcanic Field, northeast Russia. *Lithos* 122(1-2):13-24 doi:10.1016/j.lithos.2010.11.009
12. Ali S, **Ntaflos T** (2011) Alkali basalts from Burgenland, Austria: Petrological constraints on the origin of the westernmost magmatism in the Carpathian-Pannonian Region. *Lithos* 121(1-4):176-188
13. Ertl A, Marschall HR, Giester G, Henry DJ, Schertl HP, **Ntaflos T**, Luvizotto GL, Nasdala L, Tillmanns E (2010) Metamorphic ultrahigh-pressure tourmaline: Structure, chemistry, and correlations to P-T conditions. *Am Mineral* 95(1):1-10 doi:Doi 10.2138/Am.2010.3283
14. Nazarov M, Aranovich L, Demidova S, **Ntaflos T**, Brandstätter F (2011) Aluminous enstatites of lunar meteorites and deep-seated lunar rocks. *Petrology+* 19(1):13-25 doi:10.1134/s0869591111010061
15. Tscheegg C, **Ntaflos T**, Kiraly F, Harangi S (2010) High Temperature Corrosion of Olivine Phenocrysts in Pliocene Basalts from Banat, Romania. *Austrian J Earth Sci* 103(1):101-110
16. Matusiak-Malek M, Puziewicz J, **Ntaflos T**, Grégoire M, Downes H (2010) Metasomatic effects in the lithospheric mantle beneath the NE Bohemian Massif: A case study of Lutynia (SW Poland) peridotite xenoliths. *Lithos* 117(1-4):49-60
17. Tscheegg C, **Ntaflos T**, Seghedi I, Harangi S, Kosler J, Coltorti M (2010) Paleogene alkaline magmatism in the South Carpathians (Poiana Rusca, Romania): Asthenospheric melts with geodynamic and lithospheric information. *Lithos* 120(3-4):393-406 doi:10.1016/j.lithos.2010.08.025
18. Lorenz C, Nazarov M, Brandstaetter F, **Ntaflos T** (2010) Metasomatic alterations of olivine inclusions in the Budulan mesosiderite. *Petrology* 18(5):461-470 doi:10.1134/s0869591110050012
19. Nazarov M, Kurat G, Brandstaetter F, **Ntaflos T**, Chaussidon M, Hoppe P (2009) Phosphorus-bearing sulfides and their associations in CM chondrites. *Petrology+* 17(2):101-123 doi:Doi 10.1134/S0869591109020015
20. Aliani P, **Ntaflos T**, Bjerg E (2009) Origin of melt pockets in mantle xenoliths from southern Patagonia, Argentina. *Journal of South American Earth Sciences* 28(4):419-428 doi:DOI: 10.1016/j.jsames.2009.04.009
21. Bjerg EA, **Ntaflos T**, Thoni M, Aliani P, Labudia CH (2009) Heterogeneous Lithospheric Mantle beneath Northern Patagonia: Evidence from Prahuanियeu Garnet- and Spinel-Peridotites. *J Petrology* 50(7):1267-1298 doi:10.1093/petrology/egp021
22. Tscheegg C, **Ntaflos T**, Hein I (2009) Integrated geological, petrologic and geochemical approach to establish source material and technology of Late Cypriot Bronze Age Plain White ware ceramics. *J Archaeol Sci* 36(5):1103-1114 doi:DOI 10.1016/j.jas.2008.12.004

23. Ertl A, Tillmanns E, **Ntaflos T**, Francis C, Giester G, Korner W, Hughes JM, Lengauer C, Prem M (2008) Tetrahedrally coordinated boron in Al-rich tourmaline and its relationship to the pressure-temperature conditions of formation. *Eur J Mineral* 20(5):881-888 doi:Doi 10.1127/0935-1221/2008/0020-1869
24. **Ntaflos T**, Tschegg C, Coltorti M, Akinin VV, Kosler J (2008) Asthenospheric signature in fertile spinel lherzolites from the Viliga Volcanic Field in NE Russia. *Geological Society, London, Special Publications* 293(1):57-81 doi:10.1144/sp293.4
25. Guzmics T, Kodolányi J, Kovács I, Szabó C, Bali E, **Ntaflos T** (2008) Primary carbonatite melt inclusions in apatite and in K-feldspar of clinopyroxene-rich mantle xenoliths hosted in lamprophyre dikes (Hungary). *Miner Petrol* 94(3):225-242
26. Tschegg C, Hein I, **Ntaflos T** (2008) State of the art multi-analytical geoscientific approach to identify Cypriot Bichrome Wheelmade Ware reproduction in the Eastern Nile delta (Egypt). *J Archaeol Sci* 35(5):1134-1147
27. Ryabchikov ID, Kogarko LN, Krivdik SG, **Ntaflos T** (2008) Constraints of the formation of carbonatites in the Chernigovka Massif, Azov Region, Ukraine. *Geol Ore Deposit+* 50(6):423-432 doi:Doi 10.1134/S1075701508060019
28. Bali E, Falus G, Szabo C, Peate DW, Hidas K, Torok K, **Ntaflos T** (2007) Remnants of boninitic melts in the upper mantle beneath the central Pannonian Basin? *Miner Petrol* 90(1-2):51-72 doi:DOI 10.1007/s00710-006-0167-z
29. Coltorti M, Bonadiman C, Faccini B, **Ntaflos T**, Siena F (2007) Slab melt and intraplate metasomatism in Kapfenstein mantle xenoliths (Styrian Basin, Austria). *Lithos* 94(1-4):66-89
30. Demidova SI, Nazarov MA, Lorenz CA, Kurat G, Brandstatter F, **Ntaflos T** (2007) Chemical composition of lunar meteorites and the lunar crust. *Petrology+* 15(4):386-407 doi:Doi 10.1134/S0869591107040042
31. Kogarko LN, Kurat G, **Ntaflos T** (2007) Henrymeyerite in the metasomatized upper mantle of eastern Antarctica. *Can Mineral* 45:497-501 doi:DOI 10.2113/gscanmin.45.3.497
32. Kovacs I, Hidas K, Hermann J, Sharygin V, Szabo C, **Ntaflos T** (2007) Fluid induced melting in mantle xenoliths and some implications for the continental lithospheric mantle from the Minusinsk Region (Khakasia, southern Siberia). *Geol Carpath* 58(3):211-228
33. Lorenz KA, Nazarov MA, Kurat G, Brandstaetter F, **Ntaflos T** (2007) Foreign meteoritic material of howardites and polymict eucrites. *Petrology+* 15(2):109-125 doi:Doi 10.1134/S0869591107020014
34. **Ntaflos T**, Bjerg EA, Labudia CH, Kurat G (2007) Depleted lithosphere from the mantle wedge beneath Tres Lagos, southern Patagonia, Argentina. *Lithos* 94(1-4):46-65
35. Solovova IP, **Ntaflos T**, Girnis A, Kononkova NN, Akinin VV (2007) Generation and evolution of Cenozoic alkaline rocks from the Chukchi peninsula, Russia: Insight from melt and fluid-inclusions. *Acta Petrol Sin* 23(1):83-92
36. Tomasic N, Gajovic A, Bermanec V, Su DS, Linaric MR, **Ntaflos T**, Schlogl R (2006) Recrystallization mechanisms of fergusonite from metamict mineral precursors. *Phys Chem Miner* 33(2):145-159 doi:DOI 10.1007/s00269-006-0061-6

37. Akinin VV, Sobolev AV, **Ntaflos T**, Richter W (2005) Clinopyroxene megacrysts from Enmelen melanephelinitic volcanoes (Chukchi Peninsula, Russia): application to composition and evolution of mantle melts. *Contributions to Mineralogy and Petrology* 150(1):85-101 doi:DOI 10.1007/s00410-005-0007-x
38. Bjerg EA, **Ntaflos T**, Kurat G, Dobosi G, Labudia CH (2005) The upper mantle beneath Patagonia, Argentina, documented by xenoliths from alkali basalts. *Journal of South American Earth Sciences* 18(2):125-145
39. Lukacs R, Harangi S, **Ntaflos T**, Mason PRD (2005) Silicate melt inclusions in the phenocrysts of the Szomolya Ignimbrite, Bukkalja Volcanic Field (Northern Hungary): Implications for magma chamber processes. *Chemical Geology* 223(1-3):46-67 doi:DOI 10.1016/j.chemgeo.2005.03.013
40. Varela ME, Kurat G, Zinner E, Hoppe P, **Ntaflos T**, Nazarov MA (2005) The non-igneous genesis of angrites: Support from trace element distribution between phases in D'Orbigny. *Meteorit Planet Sci* 40(3):409-430
41. Hilscher G, Rogl P, Zemann J, **Ntaflos T** (2005) Low-temperature magnetic investigation of ankerite. *Eur J Mineral* 17(1):103-105 doi:Doi 10.1127/0935-1222/2005/0017-0103
42. Coltorti M, Beccaluva L, Bonadiman C, Faccini B, **Ntaflos T**, Siena F (2004) Amphibole genesis via metasomatic reaction with clinopyroxene in mantle xenoliths from Victoria Land, Antarctica. *Lithos* 75(1-2):115-139
43. Rice AHN, **Ntaflos T**, Gayer RA, Beckinsale RD (2004) Metadolerite geochronology and dolerite geochemistry from East Finnmark, northern Scandinavian Caledonides. *Geol Mag* 141(3):301-318 doi:Doi 10.1017/S001675680300788x
44. **Ntaflos T**, Richter W (2003) Geochemical constraints on the origin of the Continental Flood Basalt magmatism in Franz Josef Land, Arctic Russia. *Eur J Mineral* 15:649-663
45. Varela ME, Kurat G, Zinner E, Metrich N, Brandstatter F, **Ntaflos T**, Sylvester P (2003) Glasses in the D'Orbigny angrite. *Geochimica et Cosmochimica Acta* 67(24):5027-5046
46. Kogarko LN, Kurat G, **Ntaflos T** (2001) Carbonate metasomatism of the oceanic mantle beneath Fernando de Noronha Island, Brazil. *Contributions to Mineralogy and Petrology* 140(5):577-587
47. Schmid P, Peltz C, Hammer VMF, Halwax E, **Ntaflos T**, Nagl P, Bichler M (2000) Separation and analysis of Thera volcanic glass by INAA, XRF and EPMA. *Mikrochim Acta* 133(1-4):143-149
48. Newsom HE, **Ntaflos T**, Keil K (1996) Dark clasts in the Khor Temiki aubrite: Not basalts. *Meteorit Planet Sci* 31(1):146-151
49. Ryabchikov ID, **Ntaflos T**, Kurat G, Kogarko LN (1995) Glass-bearing xenoliths from Cape Verde: Evidence for a hot rising mantle jet. *Miner Petrol* 55(4):217-237
50. Kurat G, Palme H, Embeyisztin A, Touret J, **Ntaflos T**, Spettel B, Brandstatter F, Palme C, Dreibus G, Prinz M (1993) Petrology and Geochemistry of Peridotites and Associated Vein Rocks of Zabargad-Island, Red-Sea, Egypt. *Miner Petrol* 48(2-4):309-341
51. Kurat G, Mayr M, **Ntaflos T**, Graham AL (1989) Isolated Olivines in the Yamato-82042 Cm2-Chondrite - the Tracing of Major Condensation Events in the Solar Nebula. *Meteoritics* 24(1):35-42