

LISTA LUCRĂRIILOR ȘTIINȚIFICE

PÉTER-ISTVÁN LUSSI

TEZĂ DE DOCTORAT

Originea și semnificația xenolitelor cantonate în roci magmatische ultrapotasici miocene din sud-estul Munților Pamir
(susținută la Universitatea din București, iulie 2004, nepublicată)

CĂRȚI PUBLICATE

Costin G., P. Lussi (2004), Echilibre minerale, *Editura Cartea Universitară*, 114 p, București, ISBN 973-731-077-2

VOLUME EDITATE

Seghedi, I., Szakács, A., Mirea, V., Vișan, M., Lussi, P. (2017) Challenges of mapping in poorly-exposed volcanic areas. Guide and abstracts. *Romanian Journal of Earth Sciences*, vol. 91 Special Issue, ISSN 2248-2563, 90 pp.

ARTICOLE IN EXLENDO PUBLICATE ÎN REVISTE COTATE ISI

Balica, C., M. N. Ducea, G. E. Gehrels, J., Kirk,, R. D. Roban,, P. Lussi et al. (2020). A zircon petrochronologic view on granitoids and continental evolution. *Earth and Planetary Science Letters*, 531, DOI: 10.1016/j.epsl.2019.116005.

Quinn, D. P., J. B. Saleeby, M. N. Ducea, P. Lussi, and P. D. Asimow (2018), Late Cretaceous Construction of the Mantle Lithosphere Beneath the Central California Coast Revealed by Crystal Knob Xenoliths, *Geochem. Geophys. Geosyst.*, 19(9), 3302-3346, DOI: 10.1029/2017gc007260

Lee, C.-T. A., P. Lussi, E. J. Chin, R. Bouchet, R. Dasgupta, D. M. Morton, V. Le Roux, Q.-Z. Yin, and D. Jin (2012), Copper systematics in arc magmas and implications for crust-mantle differentiation, *Science*, 336, 64-68, DOI:10.1126/science.1217313.

Chin, E. J., C.-T. A. Lee, P. Lussi, and M. Tice (2012), Deep Lithospheric Thickening and Refertilization beneath Continental Arcs: Case Study of the P, T and Compositional Evolution of Peridotite Xenoliths from the Sierra Nevada, California, *Journal of Petrology*, 53, 477-511, DOI:10.1093/petrology/egr069.

Gordon, S. M., P. Lussi, B. Hacker, J. Valley, M. Spicuzza, R. Kozdon, P. Kelemen, L. Ratshbacher, and V. Minaev (2012), The thermal structure of continental crust in active orogens: insight from Miocene eclogite and granulite xenoliths of the Pamir Mountains, *Journal of Metamorphic Geology*, 30, 413-434, DOI:10.1111/j.1525-1314.2012.00973.x.

Chapman, A., P. Lussi, J. B. Saleeby, and S. Petersen (2011), Metamorphic evolution, partial melting and rapid exhumation above an ancient flat slab: insights from the San Emigdio Schist, southern California, *Journal of Metamorphic Geology*, 29, 601-626, DOI:10.1111/j.1525-1314.2011.00932.x.

Lee, C.-T. A., P. Lussi, and E. J. Chin (2011), Building and destroying continental mantle, *Annual Review of Earth and Planetary Sciences*, 39, 59-90, DOI:10.1146/annurev-earth-040610-133505.

Lee, C.-T. A., P. Lussi, V. Le Roux, R. Dasgupta, F. Albarede, and W. P. Leeman (2010), The redox state of arc mantle using Zn/Fe systematics, *Nature*, 468, 681-685, DOI:10.1038/nature09617.

Lee, C.-T. A., P. Lussi, T. Hoeink, J. Li, R. Dasgupta, and J. Hernlund (2010), Upside-down differentiation and generation of a 'primordial' lower mantle, *Nature*, 463, 930-933, DOI:10.1038/nature08824.

Lussi, P., J. B. Saleeby, C.-T. A. Lee, and M. N. Ducea (2009), Lithospheric mantle duplex beneath the central Mojave Desert revealed by xenoliths from Dish Hill, California, *Journal of Geophysical Research*, 114, B03202, DOI:10.1029/2008JB005906.

- Lee, C.-T. A., P. Luffi, T. Plank, H. Dalton, and W. P. Leeman (2009), Constraints on the depths and temperatures of basaltic magma generation on Earth and other terrestrial planets using new thermobarometers for mafic magmas, *Earth and Planetary Science Letters*, 279, 20-33, DOI:10.1016/j.epsl.2008.12.020.
- Horodyskyj, U., C.-T. A. Lee, and P. Luffi (2009), Geochemical evidence for exhumation of eclogite via serpentinite channels in ocean-continent subduction zones, *Geosphere*, 5, 426-438, DOI:10.1130/ges00502.1.
- Hacker, B. R., L. Mehl, P. B. Kelemen, M. Rioux, M. D. Behn, and P. Luffi (2008), Reconstruction of the Talkeetna intraoceanic arc of Alaska through thermobarometry, *Journal of Geophysical Research-Solid Earth*, 113, B03204, DOI:10.1029/2007JB005208.
- Wernicke, B., J. L. Davis, N. A. Niemi, P. Luffi, and S. Bisnath (2008), Active megadetachment beneath the Western United States, *Journal of Geophysical Research*, 113, B11409, DOI:10.1029/2007JB005375.
- Lee, C.-T. A., M. Oka, P. Luffi, and A. Agranier (2008), Internal distribution of Li and B in serpentinites from the Feather River Ophiolite, California, based on laser ablation inductively coupled plasma mass spectrometry, *Geochemistry, Geophysics, Geosystems - G3*, 9, Q12011, DOI:10.1029/2008GC002078.
- Lee, C.-T. A., P. Luffi, T. Hoink, Z. X. A. Li, and A. Lenardic (2008), The role of serpentine in preferential craton formation in the late Archean by lithosphere underthrusting, *Earth and Planetary Science Letters*, 269, 96-104, DOI:10.1016/j.epsl.2008.02.010.
- Hacker, B., P. Luffi, V. Lutkov, V. Minaev, L. Ratschbacher, T. Plank, M. Ducea, A. Patino-Douce, M. McWilliams, and J. Metcalf (2005), Near-ultrahigh pressure processing of continental crust; Miocene crustal xenoliths from the Pamir, *Journal of Petrology*, 46, 1661-1687, DOI:10.1093/petrology/egi030.
- Ducea, M. N., V. Lutkov, V. T. Minaev, B. Hacker, L. Ratschbacher, P. Luffi, M. Schwab, G. E. Gehrels, M. McWilliams, J. Vervoort, and J. Metcalf (2003), Building the Pamirs: The view from the underside, *Geology*, 31, 849-852, DOI:10.1130/G19707.

ABSTRACTE PUBLICATE ÎN REVISTE COTATE ISI

- Lee, C.-T. A., P. Luffi, V. Le Roux, R. Dasgupta (2010), Conservative tracers of oxygen fugacity in basalts and their mantle source regions, *Geochimica et Cosmochimica Acta*, 74, 1-A573.
- Lee, C. T. A., P. Luffi (2009), Conditions for craton formation and longevity, *Goldschmidt 2009, Geochimica et Cosmochimica Acta*, 73, 1-A734.
- Luffi, P., C-T. A. Lee (2009), Refertilization mechanisms of mantle lithosphere beneath mid-ocean ridges, *Goldschmidt 2009, Geochimica et Cosmochimica Acta*, 73, 1-A798.

ALTE LUCRĂRI PREZENTATE LA CONFERINȚE INTERNATIONALE (SELECTIE)

- Luffi, P. (2020). Crust Thickness Controlled Redox Conditions and the Origin of Calc-Alkaline Series in Arc Magmas. *Goldschmidt Abstracts, 2020*, 1649. Goldschmidt Conference, 21-26 iun. 2020, Hawaii, SUA
- Luffi, P. (2019). Paleo-Mohometry: Assessing the Crust Thickness of Ancient Arcs Using Integrated Geochemical Data. *Goldschmidt Abstracts, 2019*, 2075. Prezentare la Goldschmidt Conference, 18-23 aug. 2019, Barcelona, Spania.
- Seghedi, I., Mirea, V. and Luffi, P. (2019). Newly identified debris avalanche deposits (DADs) in the North Harghita Mts. (Romania): emplacement history and tectonic significance. In: Németh, K. and Kósik, Sz. (eds.), *Abstract Volume and Field Guide of the 5th International Volcano Geology Workshop. Geosci. Soc. of New Zealand Misc. Publ. vol. 152, p. 77.* Prezentare la The 5th International Volcano Geology Workshop, 25 feb. – 4 mar. 2019, Palmerston North, Noua Zeelandă.

Seghedi, I., Szakács, A., Pécskay, Z., Mirea, V., and Luffi, P. (2017) *The significance of debris avalanche deposits in the architecture of the Călimani-Gurghiu-Harghita volcanic range (Eastern Transylvania, Romania)*, in “IAVCEI 4th International Volcano Geology Workshop”, 8-14 Oct. 2017, Eastern Transylvania, Romania; Romanian Journal of Earth Sciences, vol. 91 Special Issue, p. 78-79.

Luffi, P., I. Seghedi, M.N. Ducea (2015), Subcreted oceanic crust melting beneath the Southeastern-Carpathians: evidence from garnet pyroxenite xenoliths from Quaternary basalts of the Perșani Mts., *2nd European Mantle Workshop, Wroclaw, Mineralogia* 43, 62-63.

Luffi, P., C.-T. A. Lee (2015), Simulating reactive melt transport in the oceanic mantle lithosphere – a thermodynamic approach, *2nd European Mantle Workshop, Wroclaw, Mineralogia* 43, 60-61.

Luffi, P., C.-T. A. Lee (2012), The origin of tholeiitic and calc-alkaline trends in arc magmas, *AGU 2012 Fall Meeting*, V43C-2864.

Luffi, P., C.-T. A. Lee (2011), Reactive melt transport in the oceanic lithosphere: Implications to MORB thermobarometry, *Goldschmidt 2011, Prague, Mineralogical Magazine*, 75, 1365-1365.

Antoshechkina, P. M., P.D. Asimow, E. H. Hauri, P. Luffi (2010), Effect of water on mantle melting and magma differentiation, as modeled using Adiabat_1ph 3.0, *AGU 2010 Fall Meeting*, V53C-2264.

Luffi, P., C.-T. A. Lee, and P. M. Antoshechkina (2010), The Oceanic Lithosphere as Reactive Filter: Implications for MORB and Abyssal Peridotite Compositions, *AGU 2010 Fall Meeting*, V11A-2254.

Luffi, P., C.-T. A. Lee (2009), Compositional heterogeneities in the oceanic mantle lithosphere; the role of melt-rock reactions, *Eos, Transactions, AGU 2009 Fall Meeting*, 90, V33A-2025.

Lee, C.-T. A., P. Luffi (2008), Constraints on the depths and temperatures of basaltic magma generation on Earth and other terrestrial planets, *Abstracts with Programs - Geological Society of America*, 40, 309-310.

Luffi, P., C.-T. A. Lee (2008), Reassessing melt depletion indices of peridotites; implications to the origin of subcontinental lithospheric mantle, *Eos, Transactions, AGU Fall Meeting 2008*, 89, V31C-2168.

Luffi, P., Lee, C.-T. A., Ducea, M.N., Saleeby, J.B. (2008), Composition of the Mojave lithospheric mantle: depletion or refertilization trend? *AGU Chapman Conference on Shallow Mantle Composition and Dynamics, Mt. Shasta, California*, 46.

Lee, C.-T. A., T. Hoink, P. Luffi, A. Lenardic, D. Anderson (2007), Recycling of mafic lithologies during continent formation, *Eos, Transactions, AGU Fall Meeting 2007*, 88, V32A-04.

Lee, C.-T. A., P. Luffi, T. Hoink, Z. Li, A. Lenardic (2007), The Goldilocks problem of making cratons, *Eos, Transactions, AGU Fall Meeting 2007*, 88, T22B-01.

Luffi, P., J. B. Saleeby, M. N. Ducea, C. A. Lee (2007), Rebuilding the Mojave mantle lithosphere by underplating of Farallon slab, *Eos, Transactions, AGU Fall Meeting 2007*, 88, V43B-1374.

Chapman, A. D., P. Luffi, J. B. Saleeby (2006), The origin of high-Ca annuli in garnets from the Rand Schist of the San Emigdio Mountains, Southern California, *Eos, Transactions, AGU Fall Meeting 2006*, 87, V31B-0588.

Luffi, P., P.D. Asimow, and J. Saleeby (2006), Water-fluxed fractional melting – a potential mechanism of garnet enrichment and densification during deep crustal anatexis at convergent margins. *GSA Penrose Conference on Arc Genesis and Crustal Evolution, Valdez, Alaska*, 2006, 44-45.

Luffi, P., G. Costin, M. Seclaman, (2005), The hypothesis of volume-conservative symplectitization of high-pressure phases during retrogression of eclogites: examples and implications. *7th International Eclogite Conference, Seggau, Austria, 2005, Mitt. Österr. Miner. Ges.*, 150, 97.

- Luffi, P., M.N. Ducea, B.R. Hacker, L. Ratschbacher, T. Plank (2005), Garnet-phlogopite websterite xenoliths from the Pamir: shallow mafic cumulates metamorphosed at high pressures, potential sources for (ultra)potassic melts. *7th International Eclogite Conference, Seggau, Austria, Mitt. Österr. Miner. Ges.*, 150, 98.
- Hacker, B. R., P. Luffi, V. Lutkov, V. Minaev, L. Ratschbacher, A. Patino-Douce, M. N. Ducea, M. McWilliams, J. Metcalf (2003), Near-ultrahigh pressure processing of subducted continental crust; Miocene crustal xenoliths from the Pamirs, *Abstracts with Programs - Geological Society of America*, 35, 558-558.
- Luffi, P., Hacker, B.R., Ducea, M.N., Lutkov, V., Minaev, V., Ratschbacher, L., McWilliams and M., Metcalf, J., (2003), Xenolithic evidences for high pressure partial melting and metamorphism of a subducted continental slab beneath the Pamirs. *Acta Mineralogica-Petrographica, Abstract Series*, 3, 19.