

Accepted Manuscript

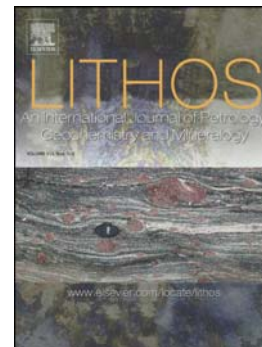
Fluid-assisted strain localization in the shallow subcontinental lithospheric mantle

Károly Hidas, Andréa Tommasi, Carlos J. Garrido, José Alberto Padrón-Navarta, David Mainprice, Alain Vauchez, Fabrice Barou, Claudio Marchesi

PII: S0024-4937(16)30212-2
DOI: doi: [10.1016/j.lithos.2016.07.038](https://doi.org/10.1016/j.lithos.2016.07.038)
Reference: LITHOS 4015

To appear in: *LITHOS*

Received date: 14 December 2015
Accepted date: 29 July 2016



Please cite this article as: Hidas, Károly, Tommasi, Andréa, Garrido, Carlos J., Padrón-Navarta, José Alberto, Mainprice, David, Vauchez, Alain, Barou, Fabrice, Marchesi, Claudio, Fluid-assisted strain localization in the shallow subcontinental lithospheric mantle, *LITHOS* (2016), doi: [10.1016/j.lithos.2016.07.038](https://doi.org/10.1016/j.lithos.2016.07.038)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Fluid-assisted strain localization in the shallow subcontinental lithospheric mantle

Károly Hidas^{1,*}, Andréa Tommasi¹, Carlos J. Garrido², José Alberto Padrón-Navarta¹, David Mainprice¹, Alain Vauchez¹, Fabrice Barou¹ & Claudio Marchesi^{2,3}

1 Géosciences Montpellier, Université de Montpellier & CNRS Place E. Bataillon, 34095 cedex 5, Montpellier, France. karoly.hidas@gmail.com

2 Instituto Andaluz de Ciencias de la Tierra, CSIC & Universidad de Granada, Avenida de las Palmeras 4, 18100 Armilla (Granada), Spain

3 Departamento de Mineralogía y Petrología, Universidad de Granada, Avenida Fuentenueva s/n, 18002 Granada, Spain

** Presently at Instituto Andaluz de Ciencias de la Tierra, CSIC & Universidad de Granada, Avenida de las Palmeras 4, 18100 Armilla (Granada), Spain*

– Manuscript submitted to *Lithos* –

Abstract (257 words)

We report microstructural evidence for fluid-assisted ductile strain localization in a ≤ 50 m-wide mylonitic-ultramylonitic shear zone in the Ronda peridotite massif, Southern Spain. Strain localization occurred at relatively low pressure (< 0.8 GPa) and moderate temperature (750-1000 °C). Initial deformation by dislocation creep resulted in formation of mylonites. Focusing of aqueous fluids in the shear zone favored the activation of dissolution-precipitation creep, resulting in further strain localization. This process is recorded by two generations of

Download English Version:

<https://daneshyari.com/en/article/6440525>

Download Persian Version:

<https://daneshyari.com/article/6440525>

[Daneshyari.com](https://daneshyari.com)