

# Tonian oceanic crust processes decoded with multi-techniques from metamorphosed, hydrothermal, coetaneous zircon-tourmaline, southern Brasiliano Orogen





## Mariana Werle<sup>1</sup>, Léo A. Hartmann<sup>1</sup>, Cassiana R.L. Michelin<sup>1</sup>, Cristiano Lana<sup>2</sup>, Glaúcia Queiroga<sup>2</sup>, Karine R. Arena<sup>1</sup>

<sup>1</sup>Instituto de Geociências, Universidade Federal do Rio Grande do Sul, Brazil <sup>2</sup>Departamento de Geologia, Universidade Federal de Ouro Preto, Brazil marianawerle96@gmail.com

**Figure 5**: Histogram showing  $\delta^{11}$ B. (a) Different geological settings of boron sources (Farber et al. 2015); (b) Frequency histogram for Bossoroca (Tur 1, Tur 2, Tur 3) and Ibaré tourmalinites.





Figure 9: Evolutionary model of oceanic crust from initial rupturing of Rodinia. Bossoroca tourmalinite formed during initial oceanic crust formation, in a continentnfluenced environment of narrow-rift.

### **References** •

K.R., Hartmann, L.A., Lana, C., 2017. U-Pb-Hf isotopes and trace elements of metasomatic zircon delimit the evolution of neoproteroz Review.

elements of metasomatic zircon delimit the evolution of neoproterozoic Conseino Nacional do Desenvolvimento Capané ophiolite in the Southern Brasiliano Orogen. International Geology Farber, K., Dziggel, A., Trumbull, R.B. et al (2015). Tourmaline B-isotopes a tracers of fluid sources in silicified Palaeoarchaean oceanic crust of th Mendon Formation, Barberton greenstone belt, South Africa. Chemical obtained from 'Laboratório de Microanálises do Geology 417:134–147. doi.org/10.1016/i.chemgeo.2015.10.009

H.M., 2004. Complexos ofiolíticos do Brasil e a metalogenia comparada das Gerais e FAPEMIG'. faixas aracuaí e brasília. In: Pereira, E.S., Castroviejo, R., Ortiz, F. (Eds.). Complejos ofiolíticos em Ibero América: Edita Proyecto XIII.1, Madrid-España. 379, pp. 101–132.



Acknowledgements •

Conselho Nacional do Desenvolvimento supported systematically investigations by the authors, including undergraduate scholarship to Mariana Werle. EPMA analyses were DEGEO/EM e Laboratório integrante da Rede Suita, M.T.F., Pedrosa-Soares, A.C., Leite, C.A.S., Nilson, A.A., Prichard, de Microscopia e Microanálises de Minas

