

Titre : Origine et circulations des fluides dans les zones de subduction

Prénom NOM : Kristijan Rajic

Coordonnées de l'encadrant BRGM	Catherine Lerouge DEPA/ISO
Programme Scientifique	Connaissance des systèmes géologiques
Directeur de thèse (ISTO)	Hugues Raimbourg
Co-directeur de thèse (BRGM)	Catherine Lerouge
Co-encadrant	Stéphane Scaillet
Ecole Doctorale	EMSTU
Laboratoire universitaire de rattachement	ISTO-UMR 7327
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- Summary :

Fluids within subduction zones play an important role in deformation mechanisms and due to high seismicity risks in these zones recently they have been intensively studied. The aim of whole project is to constrain origin and fluid circulation within uppermost part of subduction zone – accretionary prism, by studying syn-kinematic quartz veins. Field areas of interests are Kodiak archipelago on Alaska, Shimanto Belt in Japan and internal domains in the Alpes (Flysch a Helminthoides), where accreted formations are exposed and well preserved. First part includes field work at Kodiak - collecting structural data and sampling campaign followed by structural and micro-structural analysis of syn-kinematic quartz veins, while second part is dedicated to lab work – mostly to different analysis of fluids entrapped in fluid inclusions. Major task is to determinate timing of circulation by crushing *in vacuo* and stepwise heating in combination with Ar – Ar noble gas method. Beside all mentioned tasks, for fluid composition and maximum temperature on which the rocks have been exposed Raman spectroscopy will be used. To constrain which elements could be used as fluid tracers we will use LA-ICP-MS. CL, optical microscopy in both transmitted and reflected light will be applied for petrography and studies of different generations of quartz and their deformation behavior. Also, we will study fluid/rock interactions by stable isotope studies from phyllo-silicates and carbonates. Finally, with the data from all mentioned methods we will prepare fluid circulation model through accretionary prism combined with tectonic evolution of mentioned subduction zones.

- Key words : accretionary prism, subduction, fluids, quartz

- Résultats marquants :

- Publications :

Strmić Palinkaš, S., Peltekovski, Z., Tasev, G., Serafimovski, T., Šmajgl, D., Rajič, K., Spangenberg, J.E., Neufeld, K., Palinkaš, L.A. The Role of Magmatic and Hydrothermal Fluids in the Formation of the Sasa Pb-Zn-Ag skarn deposit, Republic of Macedonia. *Geosciences* 2018, 8(12), 444; DOI: <https://doi.org/10.3390/geosciences8120444>.

- Participations à congrès nationaux et internationaux :

Poster presentation at UArctic Workshop „Mineral resources of Arctic “ UiT Norges Arktiske Universitet, 11-13th June 2018, Tromsø.

Rajič, K., Strmić Palinkaš, S., Tomašić, N. (2018). Geochemical and mineralogical characteristics of gabbro pegmatites at Hamn, Northern Norway.

Poster presentations at the Winter Conference - Vinterkonferansen 2019, 7-9th January 2019, Scandic Bergen City.

1. Strmic Palinkas, S., Birkeland, A., Rajic, K., Neufeld, K. (2019) Geochemical characteristics of the Sulitjelma Cu-Zn VMS deposits, Northern Norway.

2. Heckmann, P., Rajic, K., Hansen, H., Strmic Palinkas, S., Forien, M., Bergh, S. (2019) Petrogenesis of mafic pegmatites: Comparison of gabbro pegmatites and associated gabbros at the Hamn i Senja locality, Troms, Northern Norway.