



Figure 1. Simplified geologic map of Dharwar craton showing the distribution of mafic dykes (left) (modified after French and Heaman, 2010). The enlarged map of study area (right). Sampling localities of dolerite and olivine dolerite in this study are marked as solid circles.

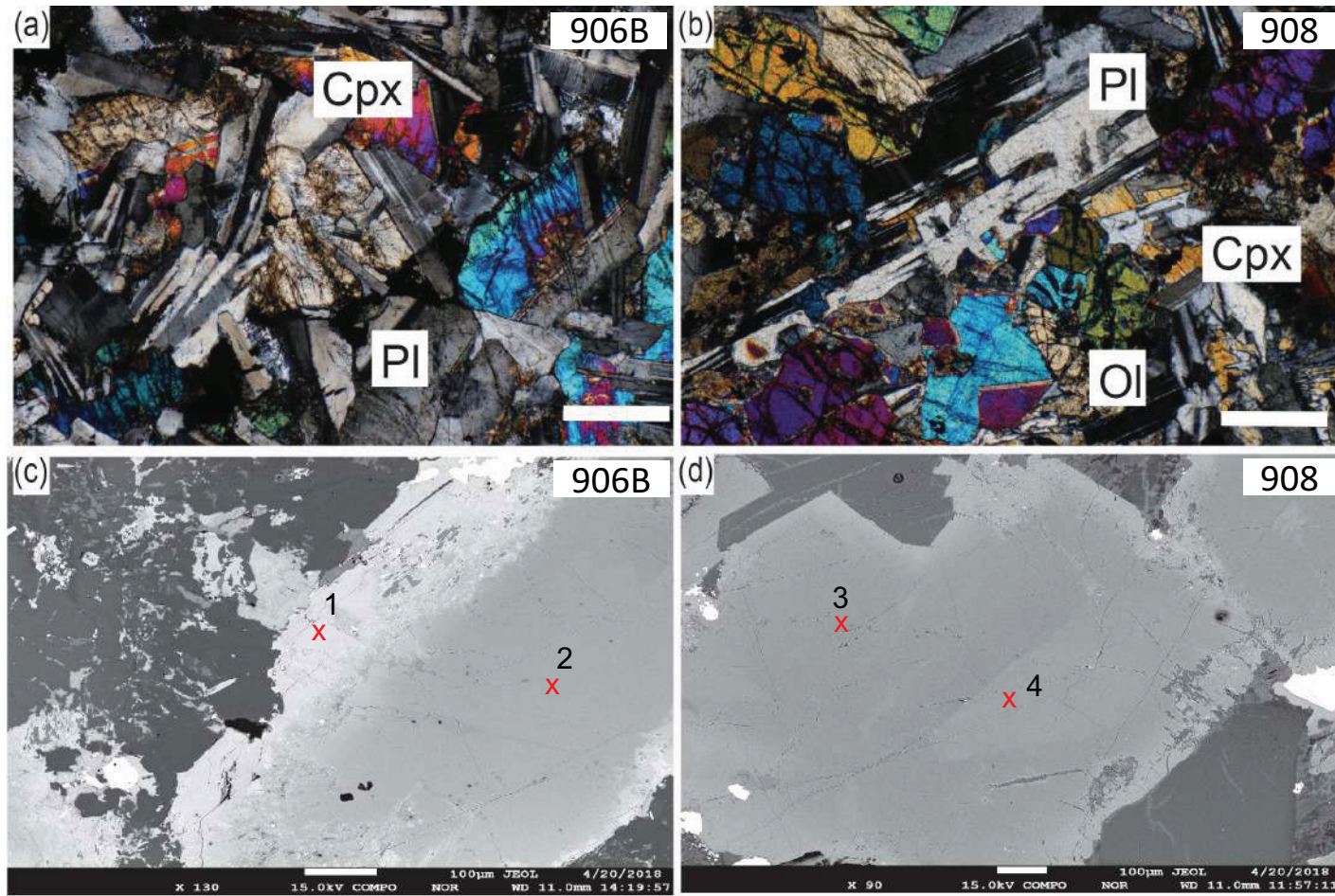


Figure 2. Photomicrographs (crossed nicols) of dolerites (a) showing ophitic texture and olivine dolerite (b) showing poikilitic textures. The scale is 0.2 mm. Back-scattered electron images showing the compositional zoning of the clinopyroxene as observed in dolerite (c) olivine dolerite (d). LA-ICPMS analytical points are marked.

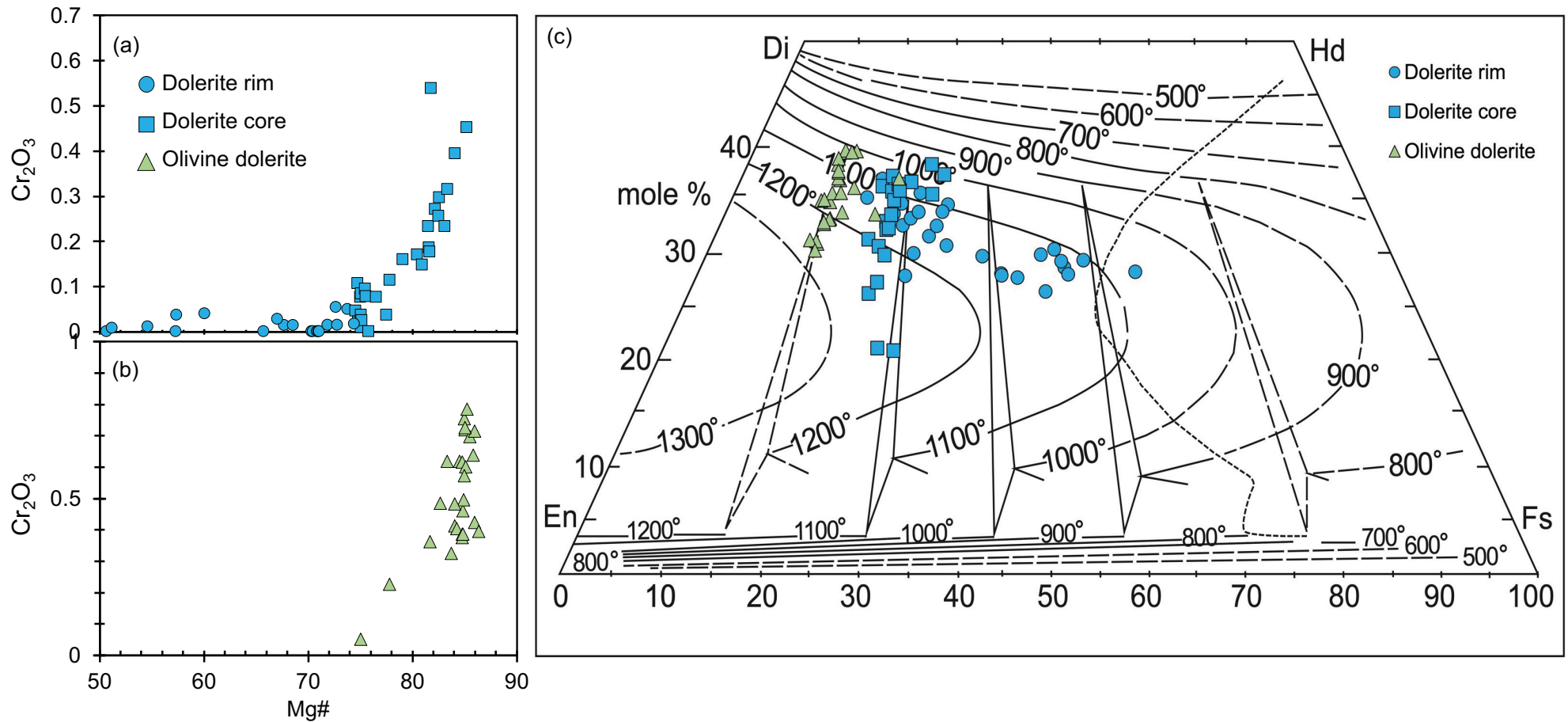


Figure 3. Discrimination diagrams of $\text{Mg}\#$ versus Cr_2O_3 for clinopyroxene mineral (a) dolerite is showing high $\text{Mg}\#$ and high Cr_2O_3 in the core compared to the rim, positive correlation can be seen (b) olivine dolerite showing high $\text{Mg}\#$ and more or less clustered distribution. (c) Clinopyroxene quadrilateral showing the compositional distribution and isotherm are after Lindsley (1983).

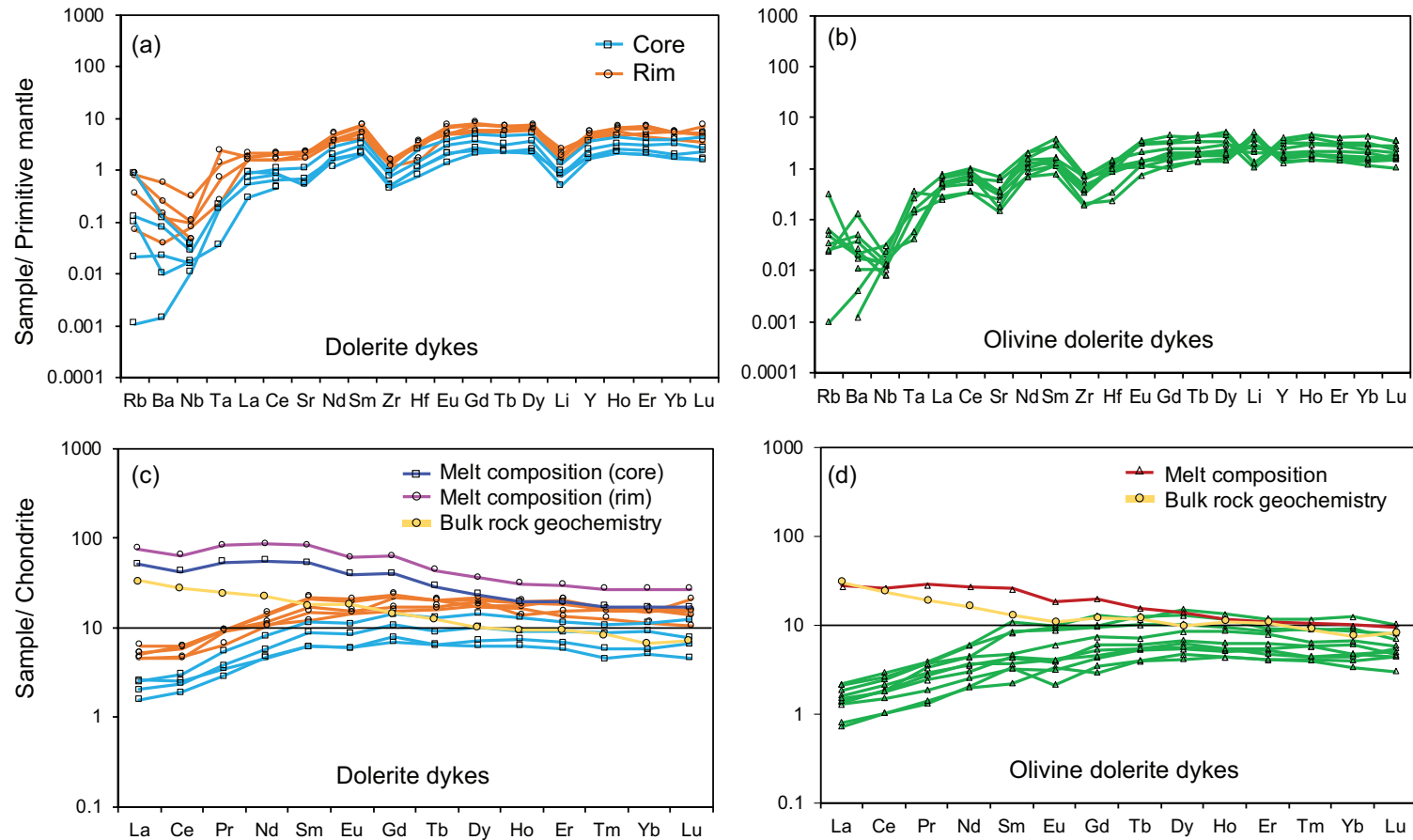


Figure 4. Primitive mantle normalized pattern for clinopyroxene for (a) dolerites (b) olivine dolerites, Chondrite normalized REEs pattern for clinopyroxene for (c) dolerites (d) olivine dolerites. Chondrite normalized REEs pattern for the estimated melt composition in equilibrium with clinopyroxene for dolerite and olivine dolerite is shown in (c) and (d). For dolerite, average core values and average rim values were taken for calculation. REE pattern for the melt in equilibrium with clinopyroxene for both dolerite and olivine dolerite is compared with bulk rock geochemistry. Normalizing values from McDonough and Sun (1995). Bulk rock compositions are after Silpa et al. (2021).