



**Mn-rich quartzose rock**

- ☆ LR quartzite (this study)
- △ Otago schist (Coombs et al., 1985)
- △ Andros quartzite (Reinecke et al., 1985)
- ▲ Sanbagawa schist (Izadyar et al., 2003)
- ▲ Praborna ore (Tumiati et al., 2010)
- ▽ Belgian coticule (Herbosch et al., 2016)
- ▼ Venezuelan exhalite (Maresch et al., 2022)

**Ocean sediment**

- Pacific (P)–Atlantic (A) chert (Murray et al., 1992)
- Pelagic clay (Li, 2000)
- Fe–Mn nodule (N) & crust (C) (Li, 2000)

