

Patrizia Landi · Nicole Métrich
Antonella Bertagnini · Mauro Rosi

Dynamics of magma mixing and degassing recorded in plagioclase at Stromboli (Aeolian Archipelago, Italy)

Published online: 20 May 2004
© Springer-Verlag 2004

Contrib Mineral Petrol (2004) 147:213–227

Figures 3 and 7 were given incorrect and are reproduced here.

The online version of the original article can be found at <http://dx.doi.org/10.1007/s00410-004-0555-5>

P. Landi (✉) · A. Bertagnini
Istituto Nazionale di Geofisica e Vulcanologia,
32 Via della Faggiola, 56126 Pisa, Italy
E-mail: landi@pi.ingv.it
Tel.: +39-50-8311936
Fax: +39-050-8311942

N. Métrich
Laboratoire Pierre Süe, CEA-CNRS, CE-Saclay,
91191 Gif/Yvette, France

M. Rosi
Dipartimento di Scienze della Terra, Università degli Studi di Pisa,
Via S. Maria 53, 56126 Pisa, Italy

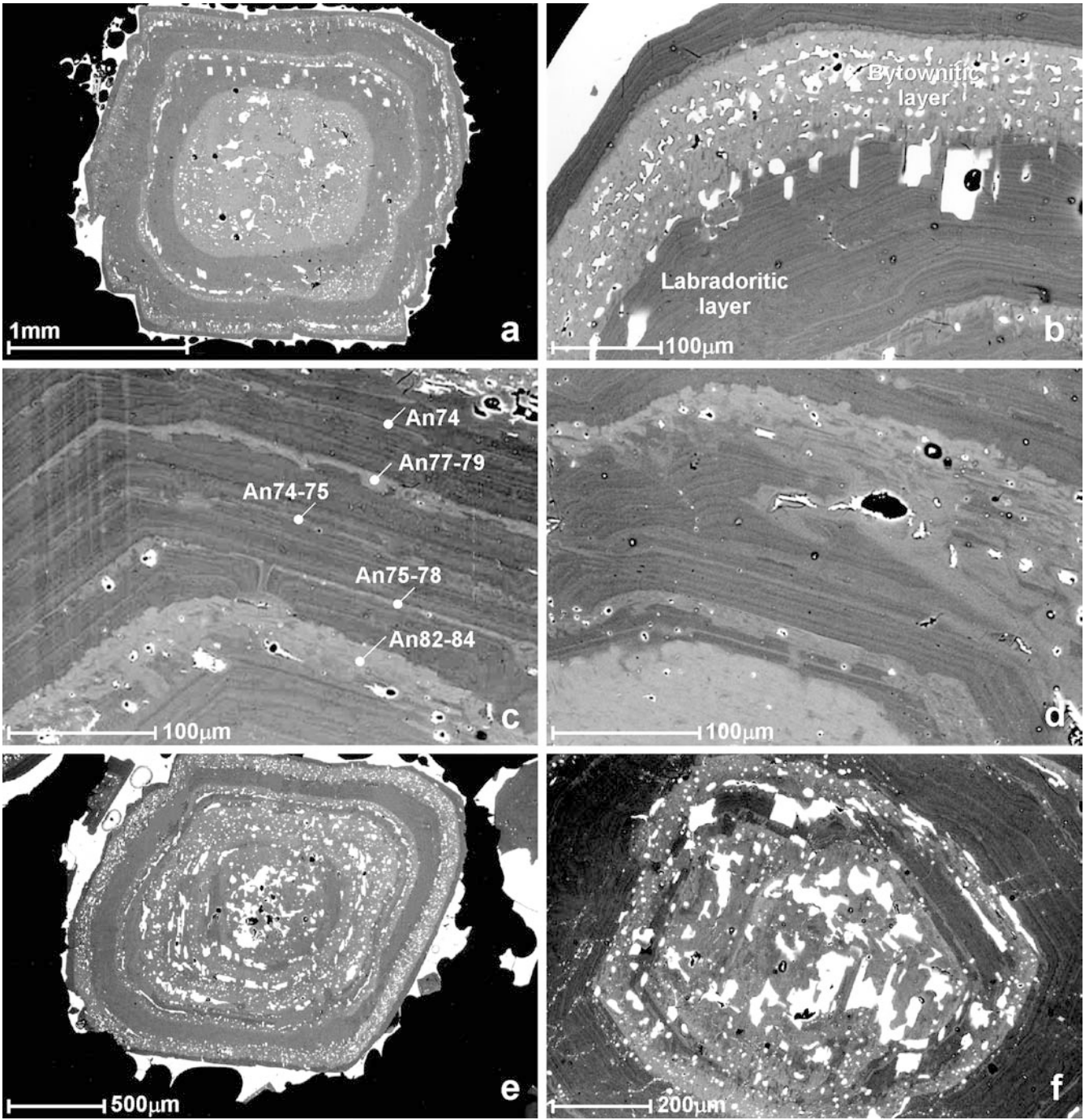


Fig. 3a–f Back-scattered electron images of plagioclase phenocrysts. Crystals are cut nearly parallel to (010) through the approximate geometric center. **a)** Zoned phenocryst consisting in alternating labradoritic (*light gray*) and bytownitic (*dark gray*) concentric layers. Large glass pockets are commonly present at the inner boundaries of the bytownitic layers; **b)** the labradoritic layers are characterized by small-scale, oscillatory zoned texture, the bytownitic by patchy-zoned, sieve textures, including micrometric glassy inclusions and voids; **c)** thin bytownitic layers and their compositions are shown. Thin layers have composition An74–79, whereas An contents > 80 are typical of thick layers (> 30 μm); **d)** dissolution surfaces at the inner boundary of the bytownitic layers are marked by angular discordances and gulfs cross-cutting the labradoritic, oscillatory-zoned layers. The outer boundary are crenulate surfaces (the crystal rim is on the top) (see also **b** and **c**); **e)** phenocryst showing an inner part with dominant bytownitic composition and remnants of labradoritic zones resulting from partial dissolution; **f)** coarse sieve-textured, patchy-zoned core rimmed by relicts of labradoritic layers

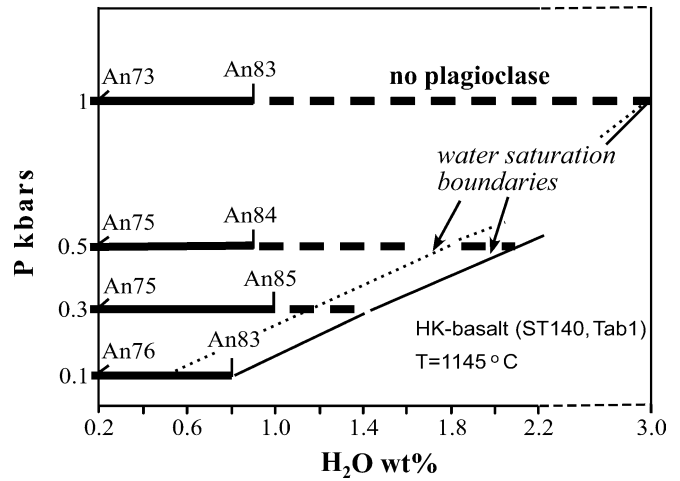


Fig. 7 Stability field of plagioclase in a HK-basaltic melt, within the range H₂O 0.2–3 wt% and pressure between 0.1 and 1 kbars, according to MELTS calculations (Ghiorso and Sack 1995). Water saturation boundaries according to MELTS calculations (*solid line*) and to Papale (1997) (*dotted line*) are shown