INTERPRETATION OF MICROMORPHOLOGICAL FEATURES OF SOILS AND REGOLITHS

Edited by Georges Stoops, Vera Marcelino and Florias Mees

The aim of the book is to provide researchers and students with a tool for the interpretation of micromorphological features of soils and regoliths. After an introduction and overview by the Editors, micromorphological aspects of specific regolith types and their pedoplasmation are highlighted, followed by a systematic discussion of the micromorphological signature of various pedogenic processes. Successive chapters deal with specific diagnostic horizons, types of features and soil-forming processes. The topics that are treated include freeze-thaw features, redoximorphic features, calcareous, gypsic and siliceous formations, textural features, spodic horizons, oxic materials, vertic features, volcanic soils, laterites, surface crusts, salt minerals, authigenic silicates, phosphates, sulphidic and sulphuric materials, surface horizons, organic material, and features related to faunal activity. The last chapters deal with the impact of man on soil profiles, and the use of micromorphology in archaeology and palaeopedology.

The book is written by a team of more than 40 authors of 15 nationalities, representing different schools but using the same concepts and terminology.

Cover photos:
Top photo: Kalistrontite crystals in a semi-arid soil from Namibia (cross-polarized light).
Middle photo: SEM image of goethite in a laterite from western Congo.
Bottom left photo: Vivianite crystals in bog ore from northern Belgium.
Bottom middle photo: Lenticular structure due to frost action in a soil from Norway.
Bottom right photo: Hematite-impregnated material with illuvial kaolinite coatings in a young laterite from Burkina Faso.

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