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Au crystal growth on natural occurring Au—Ag aggregate elucidated by means of precession electron diffraction (PED).

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In the present work, a lamella from an Au—Ag aggregate found in Ni-laterites has been examined using Transmission Electron Microscope to produce a series of Precision Electron Diffraction (PED) patterns. The analysis of the structural data obtained, coupled with Energy Dispersive X-ray microanalysis, made it possible to determine the orientation of twinned native gold growing on the Au—Ag aggregate. The native Au crystal domains are found to have grown at the outermost part of the aggregate whereas the inner core of the aggregate is an Au—Ag alloy (~4 wt% Ag). The submicron structural study of the natural occurring Au aggregate points to the mobilization and precipitation of gold in laterites and provides insights on Au aggregates development at supergene conditions. This

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