



Contribution ID: 179

Type: **Talk**

Crystal organization and calcite/aragonite twin formation in biocarbonate structural materials

Monday, 14 March 2022 15:50 (20 minutes)

We investigated the sub-micrometer to nanometer scale organization of calcite and aragonite biocrystals with EBSD, FE-SEM and STEM. We highlight the very specific microstructural nature of foraminiferal calcite and aragonite, in particular, the extensive {001} twinning of shell carbonate, describe a new microstructure for the twinned crystals and show that species that developed perfect/near-perfect spherical chamber/shell morphologies have their shell calcite almost fully twinned.

Primary author: Dr GRIESSHABER, Erika (Department für Geo- und Umweltwissenschaften)

Co-authors: Prof. CHECA, Antonio; Mrs GÄNSLER, Heidemarie; Prof. HESS, Martin; Mrs LASTAM, Jeraldine; Prof. SCHMAHL, Wolfgang W.; Dr SÁNCHEZ-ALMAZO, Isabel; Dr YIN, Xiaofei

Presenter: Dr GRIESSHABER, Erika (Department für Geo- und Umweltwissenschaften)

Session Classification: Natural Materials and Environments

Track Classification: Main conference: Natural Materials and Environments (Minerals, Biogenic Materials...)