

Contents

About the Special Issue Editor	vii
Preface to "Nucleation of Minerals: Precursors, Intermediates and Their Use in Materials Chemistry"	ix
Denis Gebauer	
Editorial for Special Issue "Nucleation of Minerals: Precursors, Intermediates and Their Use in Materials Chemistry"	
Reprinted from: <i>minerals</i> 2018 , <i>8</i> , 239, doi: 10.3390/min8060239	1
John Spencer Evans	
Polymorphs, Proteins, and Nucleation Theory: A Critical Analysis	
Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 62, doi: 10.3390/min7040062	4
Alejandro Burgos-Cara, Christine V. Putnis, Carlos Rodríguez-Navarro and Encarnación Ruiz-Agudo	
Hydration Effects on the Stability of Calcium Carbonate Pre-Nucleation Species	
Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 126, doi: 10.3390/min7070126	16
Roland Kröger and Andreas Verch	
Liquid Cell Transmission Electron Microscopy and the Impact of Confinement on the Precipitation from Supersaturated Solutions	
Reprinted from: <i>Minerals</i> 2018 , <i>8</i> , 21, doi: 10.3390/min8010021	31
Cheng Zeng, Caitlin Vitale-Sullivan and Xiang Ma	
In Situ Atomic Force Microscopy Studies on Nucleation and Self-Assembly of Biogenic and Bio-Inspired Materials	
Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 158, doi: 10.3390/min7090158	40
Yoshihiro Kuwahara, Wen Liu, Masato Makio and Keisuke Otsuka	
In Situ AFM Study of Crystal Growth on a Barite (001) Surface in BaSO ₄ Solutions at 30 °C	
Reprinted from: <i>Minerals</i> 2016 , <i>6</i> , 117, doi: 10.3390/min6040117	58
Joe Harris and Stephan E. Wolf	
Desiccator Volume: A Vital Yet Ignored Parameter in CaCO ₃ Crystallization by the Ammonium Carbonate Diffusion Method	
Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 122, doi: 10.3390/min7070122	76
Asumi Ochiai and Satoshi Utsunomiya	
Crystal Chemistry and Stability of Hydrated Rare-Earth Phosphates Formed at Room Temperature	
Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 84, doi: 10.3390/min7050084	83
Dominik Gruber, Stefan L. P. Wolf, Andra-Lisa M. Hoyt, Julian P. Konsek and Helmut Cölfen	
A Micro-Comb Test System for In Situ Investigation of Infiltration and Crystallization Processes	
Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 187, doi: 10.3390/min7100187	104
Mercedes Ossorio, Tomasz M. Stawski, Juan Diego Rodríguez-Blanco, Mike Sleutel, Juan Manuel García-Ruiz, Liane G. Benning and Alexander E. S. Van Driessche	
Physicochemical and Additive Controls on the Multistep Precipitation Pathway of Gypsum	
Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 140, doi: 10.3390/min7080140	115

Julian Opel, Matthias Kellermeier, Annika Sickinger, Juan Morales, Helmut Cölfen and Juan-Manuel García-Ruiz Structural Transition of Inorganic Silica–Carbonate Composites Towards Curved Lifelike Morphologies Reprinted from: <i>Minerals</i> 2018 , <i>8</i> , 75, doi: 10.3390/min8020075	129
Linda Pastero, Marco Bruno and Dino Aquilano About the Genetic Mechanisms of Apatites: A Survey on the Methodological Approaches Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 139, doi: 10.3390/min7080139	141
Casper Jon Steenberg Ibsen and Henrik Birkedal Pyrophosphate-Inhibition of Apatite Formation Studied by In Situ X-Ray Diffraction Reprinted from: <i>Minerals</i> 2018 , <i>8</i> , 65, doi: 10.3390/min8020065	162
Jessica Ross, Lu Gao, Orysia Meouch, Essie Anthony, Divya Sutarwala, Helina Mamo and Sidney Omelon Carbonate Apatite Precipitation from Synthetic Municipal Wastewater Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 129, doi: 10.3390/min7080129	171
Yuki Kezuka, Kosuke Kawai, Kenichiro Eguchi and Masahiko Tajika Fabrication of Single-Crystalline Calcite Needle-Like Particles Using the Aragonite–Calcite Phase Transition Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 133, doi: 10.3390/min7080133	188
Franca Jones Crystallization of Jarosite with Variable Al ³⁺ Content: The Transition to Alunite Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 90, doi: 10.3390/min7060090	197
Denis Gebauer, Kjell Jansson, Mikael Oliveberg and Niklas Hedin Indications that Amorphous Calcium Carbonates Occur in Pathological Mineralisation—A Urinary Stone from a Guinea Pig Reprinted from: <i>Minerals</i> 2018 , <i>8</i> , 84, doi: 10.3390/min8030084	214
Zoltán Bacsik, Peng Zhang and Niklas Hedin Ammonium-Carbamate-Rich Organogels for the Preparation of Amorphous Calcium Carbonates Reprinted from: <i>Minerals</i> 2017 , <i>7</i> , 110, doi: 10.3390/min7070110	226