

Cooling crystallization of γ -glycine from water/oleic acid emulsion

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In w/o emulsion, it was found that small γ -glycine crystals early induced in some droplets move out by vigorous stirring and they act as seeds in the droplets with no nucleation event yet. In addition, the confined solution of γ -glycine in w/o emulsion should has higher supersaturation compared with continuous solution in o/w emulsion, because degree of supersaturation of droplets with no crystal increases rapidly by continuous cooling. This high supersaturation was found to strongly promote crystal growth of γ -glycine along c-axis. In consequent, aspect ratio of γ -glycine crystals produced from w/o emulsion was 2.0 times larger than that produced from o/w emulsion.