In summary, the 3D image of a complex bicontinuous structure developed via spinodal decomposition (SD) was observed *in a real experimental system* by use of a laser scanning confocal microscope (LSCM). The Fourier transform of the image gave the structure factor, $S(q)$, which was compared with that from a scattering experiment in a polymeric mixture and with that from computer simulation. They agreed quantitatively, especially in terms of the existence of the higher order shoulder in $S(q)$. This clearly demonstrates that the 3D image from LSCM characterizes the structure accurately. This should give us intuitive insight into the complex structure and enables us to determine quantities difficult to obtain from the conventional scattering methods, such as the mean curvature of the interface. This analysis is in progress.

References and Notes

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(21) The upward deviation of the FFT of the LSCM and simulation data from Porod's law, $S(q) \sim q^{-4}$, in the large q-region is due to the discreteness of the data.

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CORRECTIONS

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The abscissa of Figure 7 is mislabeled; instead of "$\bar{N}$", it should be "$/n(\bar{N})$", the natural logarithm of $\bar{N}$.

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