**Nanocomposites Using Swollen Layered Silicates**

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**DESCRIPTION OF WORK**
- Preparation of swollen layered silicates by means of surfactant intercalation\(^1,2\)
- Polymeric composite membranes with nanoscale dispersion of silicate particles

**MAJOR OBSERVATIONS**
- XRD: showed that the gallery spacing between silicate layers was increased
- SEM: showed that original morphology of layered silicates was changed
- TEM: showed that the swollen derivatives held the layered structure
- SAXS: suggested that the layered particles were dispersed in polymer matrix