

the liquid-crystalline phase. Then the intensity of the inverted hexagonal phase began to decrease with increasing temperature up to the disappearance of the gel phase. The repeat spacing of the inverted hexagonal phase remained relatively constant when coexisting with the liquid-crystalline phase, but, with increasing temperature, the scattering intensity increased at the expense of the lamellar liquid-crystalline phase. Two types of crystal phases Lc1 and Lc2 were observed in all codispersions containing α -tocopherol. The Lc1 is characterised by the first four orders of the sharp diffraction indexing a d-spacing ratio 1:1/2:1/3:1/4 in small-angle region with multiple diffractions in the wide-angle region, and Lc2 is characterised by the broad lamellar diffraction in the small-angle region with multiple diffractions in wide-angle region. Static X-ray diffraction indicates that the stoichiometry of phospholipid: α -tocopherol in Lc1 and Lc2 is about 4:1. In cooling scans performed immediately after heating scans, no crystal phases were observed in all codispersions. The results indicate that during the incubation, α -tocopherol molecules in the gel phase concentrate and form the crystal phase domain Lc1 which has a stoichiometry of 4:1 for phospholipid: α -tocopherol. With increasing temperature the hydrocarbon chains of the domain are tilted at more than 35° to the bilayer normal and transform into the Lc2 domains which transform into the inverted hexagonal phase at higher temperature. When cooling down the inverted hexagonal phase directly transforms into gel phase.

Forthcoming Meetings

9th Annual Fibre Diffraction and Non-Crystalline Diffraction Workshop

June 26-28, 2000, University of Sheffield

(Organised by Mark Shotton, Richard Denny and Trevor Forsyth)

[For further information and registration, see the web pages at <http://www.dl.ac.uk/SRS/CCP13> or contact m.shotton@dl.ac.uk]

10th London Muscle Conference

September 15, 2000, Imperial College, London

(Organised by John Squire, Nancy Curtin and Pradeep Luther)

[Details from Prof. John Squire j.squire@ic.ac.uk, 0207 594 3185]

3rd Alpbach Workshop on Fibrous Proteins: "Coiled-Coils, Collagen and Co-Proteins"

September 16-21, 2001, Boglerhof Hotel, Alpbach, Austria

(Organised by David Parry, John Squire and Bob Goldman)

[Details from Prof. John Squire j.squire@ic.ac.uk, 0207 594 3185]

DARTS Bursaries

DARTS at Daresbury Laboratory has funded several bursaries for PhD students to attend the 9th Annual Fibre Diffraction and Non-Crystalline Diffraction Workshop at the University of Sheffield (see above and inside back cover). These bursaries will cover the cost of accommodation and registration and may include a contribution to travelling expenses. An application for a bursary can be made through the web pages at <http://www.dl.ac.uk/SRS/CCP13>

All bursary applications must be accompanied by the submission of a poster abstract to the Workshop.