

Synchrotron Radiation Projects of Industrial Interest, N. MARKS, CLRC Daresbury Laboratory -
Early synchrotron radiation sources were constructed principally to provide facilities for multi-discipline academic studies but it was soon realised that they also represented a unique source of radiation for a wide range of industrial research and development studies. Many synchrotron sources now support commercial programmes involving industries with manufacturing bases as diverse as materials (semi-conductors, ceramics, polymers, etc.), chemicals, petroleum products, health-care products and pharmaceuticals; funding authorities are now reluctant to finance new projects without firm evidence of significant industrial interest. The presentation will briefly review the properties and relevant research techniques associated with synchrotron radiation, highlighting a number of major sources presently supporting commercial research programmes. These include both strategic research investigations and the interest in the use of synchrotron radiation for the lithographic production of micro-mechanical components and electronic micro-circuits. Finally, details of a number of proposed new European sources will be presented, together with an appraisal of the potential role of engineering companies in supplying systems and components for these new projects.