



**“New era of knowledge-based design of new materials and better drugs:
European accelerator-based photon facilities join forces”**

Discovery Science

- Transients in chemical reactions
- Crystallography of local order
- Photosynthesis
- Evolution of electronic correlations
- Nonequilibrium matter
- Water – bio interface
- X-ray quantum optics

Bio-Medical Science

- Biochemical reactions
- Nature of signal transmission
- Smart materials in med-tech applications
- In-vivo medical imaging

Applied Sciences

- Materials under extreme conditions
- Engineering and functional materials
- Catalytic reactions
- Rational materials design
- Ultrafast switching of materials properties

Opportunities for Industry

- Catalysis
- Batteries, energy conversion systems
- New and better drugs
- Engineering materials
- Future medical imaging systems