# VISIONS OF photonics4life

As a Network of Excellence, photonics life aims at providing a coherent framework for the strongly fragmented field of Biophotonics in Europe. One of the challenging tasks of photonics life is therefore to structure and integrate the research and technological developments throughout the various subdisciplines of Biophotonics with their manifold interdependences.

photonics4life targets to bridge the gap between different disciplines ranging from physics and chemistry via engineering to biology and medicine. Furthermore, photonics4life wants to link the expertise of research institutes with SMEs and large companies in order to foster Biophotonics research and strengthen Europe's economic competitiveness on the global Biophotonics market.

photonics4life is composed of partners standing on the forefront of Biophotonics research. With its commitment to interdisciplinarity, photonics4life enables the initiation of a paradigm shift in Biophotonics research: away from a mostly linear and technology-driven towards a holistic user- and market-oriented approach. Consequently, photonics4life does not only focus on individual technological developments but also puts emphasis on the needs of the physician and patient.

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NETWORK OF EXCELLENCE FOR BIOPHOTONICS

»Networking
for Better Health Care«

# WHAT IS BIOPHOTONICS?

Biophotonics is an ambitious, multidisciplinary research area that utilizes light-based technologies in medicine and life sciences. The term derives from two words of Greek origin: 'bios' means life and 'phos' light. Biophotonics refers to the interplay between light and biological matter.

Improving diagnosis, therapy and follow-up care, Biophotonics sets the trend towards a personalized medicine. It plays a crucial role for better and improved health care, in reducing health-care costs, and it helps to approach the challenges of an ageing society in more suitable ways. The enormous annual growth of industries in this field reflects the economic and socio-political importance of Biophotonics.

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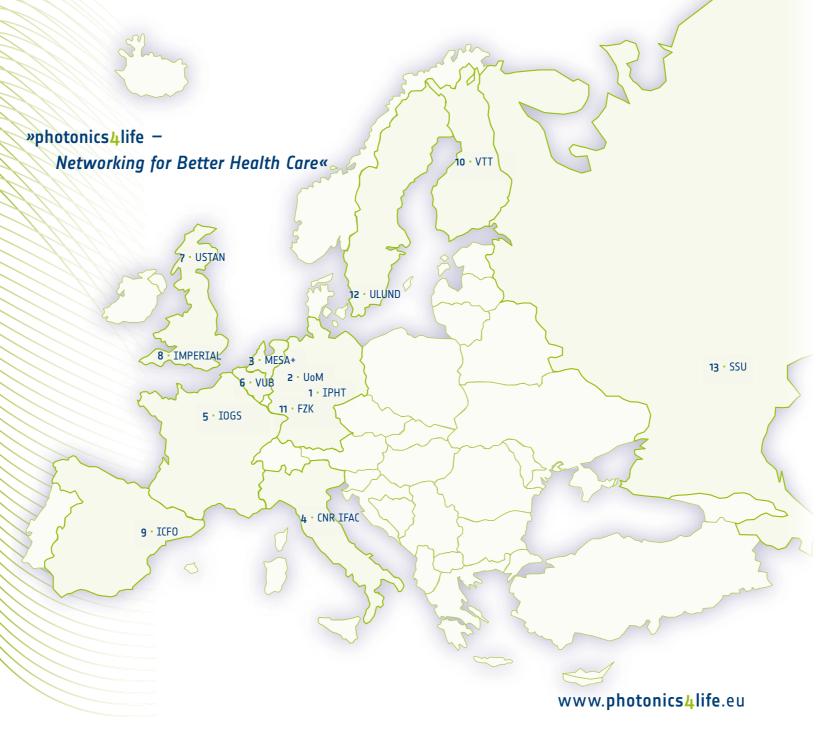
# PARTNERS

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- 3 Universiteit Twente · MESA+
- 4 Istituto di Fisica Applicata > Nello Carrara < · CNR IFAC
- 5 CNRS Institut d'Optique Graduate School · **IOGS**
- 6 Vrije Universiteit Brussel · VUB
- 7 University of St. Andrews · USTAN
- 8 Imperial College London · IMPERIAL
- 9 Instituto de Ciencias Fotónicas Barcelona · ICFO
- 10 Valtion Teknillinen Tutkimuskeskus · VTT
- 11 Forschungszentrum Karlsruhe · FZK
- 12 Lunds Universitet · ULUND
- 13 Saratovskij Gosudarstvennyj Universitet · SSU



# INDUSTRIAL USER CLUB

photonics4life is opening its competence in Biophotonic research and development to industry right from the start to overcome the widespread innovation paradox.

Acting as an interface between the developers of Biophotonic methods and tools, their providers and most important their users in medicine and the life sciences, photonics4life will initiate and support the development of new photonic based methods and technologies for better health care.

The full range of competences in

- Photonic technologies to analyse cell processes
- Photonics for non- and minimally-invasive diagnosis and therapy
- Microfabrication of highly integrated opto-fluidic systems for Biophotonic applications
- Optical micro manipulation and therapy
- Computer modeling and analysis of chemical and physical data of biological material and processes
- Clinical applications of Biophotonic methods

is offered through the Industrial User Club.

In joining this club companies will get

- Access to the available technologies and methods, to the competences and to the researchers behind
- Access to the latest results of the scientific output and
- Access to information on industrial companies with activities related to Biophotonics via a comprehensive data base.
- Visibility by presenting themselves in the photonics4life Newsletter and on the photonics4life Homepage
- Discount when participating in photonics4life workshops, seminars, training activities etc.
- Possibility to distribute their job offers in a network with young and motivated scientists

photonics 4 life will also support entrepreneurs in Biophotonics by dedicated intensive courses covering economic aspects and concrete project plans. If you or your company are interested in becoming an IUC member, please contact the IUC Officer (see last page for details).