

# Markus Pessa

The Finnish Academy of Science and Letters Academy Award for 2016 was presented to Emeritus Professor Markus Pessa for his work in developing optoelectronics and semiconductor research. He was professor of physics at Tampere University of Technology in 1976–2008.

Markus Pessa directed his attention principally to compound semiconductors, the properties of which are significantly better than those of elemental semiconductors. In the late 1990s efforts were made to tempt him and his research team to move to Stockholm, but Tampere University of Technology reacted promptly to create its own Optoelectronic Research Centre (ORC), which guaranteed Pessa and his team the working facilities they needed in Finland. Under his leadership the ORC developed into one of the most significant university centres for optoelectronic research in Europe.

Professor Pessa's achievements were based on the development of MBE technology and its application to the manufacture of compound semiconductors to an accu-

cy of one atomic layer. These layered structures have enabled the large-scale adoption of energy-saving LED light bulbs, for instance, and lasers based on them have contributed to the construction of global optical communications networks and also CD and DVD players. The same technology is also employed in various detectors and to improve the efficiency of photovoltaic cells, etc.

Professor Pessa is the only Finn to have been invited to membership of the US National Academy of Engineering, and he has a vast number of publications on basic research into material physics to his name. He was elected to membership of the Finnish Academy of Science and Letters in 1994, chosen as Professor of the Year in 1997 and awarded the Millennium Prize in 2007.

He has supervised more than 30 doctoral theses, and many students of his are now occupying professorships in universities or managerial positions in industry.

The Academy Award, of 15,000 euros, is now being awarded for the 72nd time.

*Academy Award was presented  
to Emeritus Professor  
Markus Pessa for his work in  
developing optoelectronics and  
semiconductor research*



*The Academy Award highest honour that  
the Finnish Academy of Science and Letters  
can confer on a scholar in recognition of  
his life's work. The Academy has awarded  
the Academy Award since 1945.*

*Picture:  
Tampere University of Technology*