

Dr. Ahmet Çakir

Daylight in Your Eyes and on Your Skin

Speakers Profile

Ahmet Çakir studied telecommunication technology at the Technical University of Berlin. After receiving his doctor's degree in lighting technology, he became a research fellow with the Institute of Ergonomics where he conducted the investigation of VDT utilization in German industries, sponsored by the German Ministry of Labour. The scientific outcome of this study was the main basis for German standards for computerized workplaces. He was the principal author of "The VDT Manual" which was published in five languages, "a landmark event in human computer interaction" (Shackel).

Since 1980 he has been the scientific manager of the ERGONOMIC Institute for Social and Occupational Sciences in Berlin. He is a Fellow of Ergonomic Society and Editor-in-Chief of Behaviour & Information Technology. The publication of his research report „Light and health“ in 1990 marks the beginning of the debate on health effects of lighting in work environments.

Abstract

It is unlikely that too many persons can be found who do not believe that daylight is crucial for human life. Even the Holy Bible states that the creation of light marks the beginning of life in the universe. But humans today spend more and more time to protect themselves from daylight while moving in exterior space. And during the best time of the day when solar radiation is most efficient to induce vitamin D, they spend most of their time in buildings that block UV.

Forced by the move toward energy efficiency in buildings, more sophisticated glazing systems have been developed that filter out the rest of UV that would penetrate normal glazing and also IR. Doing so, also essential parts of visible radiation are filtered out



leaving a greenish light to dominate work environments. Modern glasses designed for energy efficiency reduce the intensity of the green part up to 50%, but up to 80% in the regions blue and red.

Experts who should know it better are reluctant to recognize the importance of solar radiation on human skin. Even if they write reports on the impact of light on human health they mostly limit the focus on visible light. Light in your eyes, light for vision, is the functional part of the impact, light on your skin plays the vital part.

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