



Innsbruck Physics Colloquium

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The Future of Light

Optoelectronic devices based on group III nitrides (i.e., LEDs) provided a completely new technology in the lighting sector, the solid state lighting. There has been an incredible development in the recent more than 20 years: LEDs for illumination and projectors in mobile devices were just a vision for a far away future. Meanwhile, such devices are commodity based on the significant increase in their efficiency. This has been the driving force for about one decade. However this development has not fully accomplished yet. The recent improvements of the device design and in doping strategies yielded efficiencies close to the fundamental limit reaching internal quantum efficiencies of more than 90 %.

Nowadays, it is recognized that LED offer a big variety of opportunities beyond efficient lighting. There are many applications that could only be addressed by the unique characteristics of semiconductor LED light sources. Thus, it is much more than cost cutting triggering further research on group III nitride optoelectronics, such as e.g. hetero-integration of electronics and optoelectronics.

Tuesday, 12.3.2019, at 17:15 h in lecture hall C