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Introduction

It has been over 10 years since the start of this conference, "High-Power Diode Laser Technology and Applications." During that time, we have seen a steady progression of the average power per bar, with 20% fill factor bars moving from 40 watts per bar to 100 watts per bar, and the average efficiency improving from 45% to 65%. This has been remarkable progress for this field. This conference discusses many of the recent advances in this area that have led to an improvement in power, efficiency and reliability.

As we move forward, the ultimate goal is to achieve the same brightness at high power levels as the fiber laser and the disk lasers. This is a very ambitious goal, with many researchers in the field. Wavelength beam combining can certainly go a long way toward achieving this brightness level, but a new technology will ultimately be needed to achieve the same cost/performance of the more conventional high-power industrial lasers. We would like to encourage a discussion about these new technologies, and how a competitive product can be developed with new advanced technology.

This conference is a great forum for sharing the technical progress in these areas. We want to encourage researchers and engineers to open up the discussions about many of the technical challenges faced today in achieving these goals. In the future, we look forward to hearing about the developments on higher brightness, higher-power direct diode laser systems, and applications of these new technologies.

Mark S. Zediker