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封面描绘了基于激光通信的卫星互联网蓝图,利用卫星网络广覆盖、低时延优势,并通过激光传输为网络扩容提速。星载光天线体积、功耗小,波束集中,在远距离传输中具有明显优势,卫星之间利用激光链路组网来承载各种互联网业务。

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超精密测量技术

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科学家门捷列夫说：“科学是从测量开始的。”“现代热力学之父”开尔文有一条著名结论：“只有测量出来，才能制造出来。”超精密测量是指测量精度达到纳米量级的先进测量技术、系统与仪器，是现代科技发展与高端装备制造的基石，是工业生产的倍增器。近年来，随着现代光学与光电子学的快速发展（如微纳光学、极短波长光学、量子光学），出现了若干新的光学测量原理与方法，推动了超精密测量向更高分辨、更高精度、更高效率和更高性能等方向不断发展。

建设高端超精密测量强国在我国具有十分突出的必要性和紧迫性，它是科学探索的“眼睛”、高端制造的“尺子”。为集中展示国内外超精密测量在原理方法、技术、仪器及其应用等方面的最新研究进展，促进学术交流，推动相关领域纵深发展，《激光与光电子学进展》推出“超精密测量技术”专题，其中包括1篇特邀导言、16篇特邀综述和8篇特邀研究论文。



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封面文章
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