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生物医学
光子学

中国激光

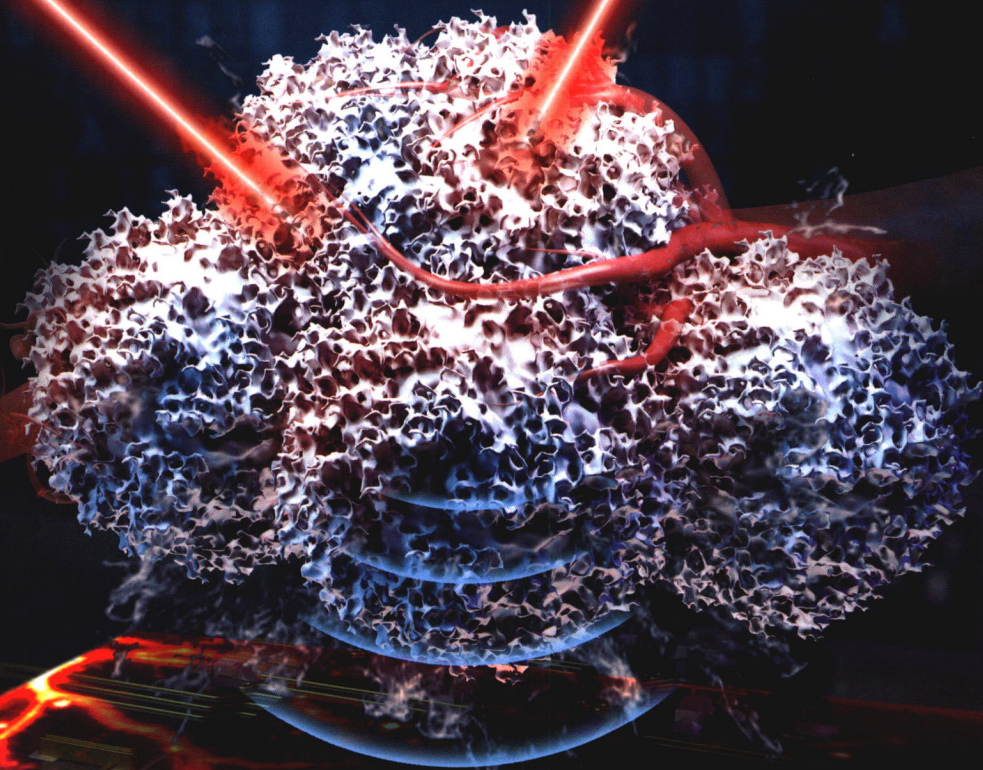
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双轴激发光声显微

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——生物学光子学——

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封面解读

封面呈现了双侧激发的声学分辨光声显微成像的基本原理。光声显微成像技术在医学生物领域具有广阔的应用前景,但传统激发方式无法满足复杂生物样品的高质量成像要求。通过改进传统声学分辨光声显微镜的激发方式,将单侧激发改为双侧激发,可提升成像过程中光束对深处淋巴结、肿瘤、脑等非规则形状生物组织样本的覆盖面积,进而获得更好的对比度和信噪比,成像性能更具优势。

封底解读

封底展示了面向眼底术中导航的光学相干血流造影(iOCTA)技术。通过集成手术显微镜与光学相干血流造影系统,iOCTA 技术可以实现术中眼底视网膜血流灌注的动态监测。其中,光学相干断层扫描血管造影(OCTA)采用了“逆信噪比-复值退相关”特征空间技术,解决了照明动态范围大、临界态血流检测难的问题,在毛细血管水平揭示了活体兔眼血流灌注随眼内压的时空动态演变过程。术中眼底血流灌注信息有助于客观评价手术过程和预测术后效果。

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术中光学相干成像

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