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NV色心光纤量子传感

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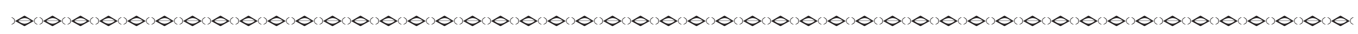
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封面解读

封面展示了基于金刚石氮-空位色心的光纤传感模型示意图,图中金刚石-光纤探头通过对氮-空位色心的激发以及荧光的收集可对集成电路或者芯片的磁场、温度、微波场等物理量进行测量,局域放大的图像为氮-空位色心的结构示意图。

封底解读

听万物声,促万物生

封面以“寻光”视角切入,感知万物的声音,深度契合各领域的发展命脉。揭示了基于线性调频脉冲的光纤分布式声波传感(DAS)技术是构建智慧地球、智慧海洋、智慧城市的重要支撑。DAS为感知世界提供了变革性技术手段,对推动科学研究和人类社会的智能发展具有重要意义。

内封面解读(封二)

封面以快速发展的原子光钟为突出要点。以精密的机械钟表暗指具有千年发展史的时间科学依旧生机勃勃。环绕在四周的金属元素周期表,暗示了在当今使用原子作为时间频率标准的载体已经成为世界上最具潜力的研究方向。背景上无限向内延伸的管路也表达着原子频标不仅在未来的研究之路上充满了未知,需要研究人员披荆斩棘、深入探索,还暗示了原子频标将在未来有着深不可测的应用前景。

内封面解读(封三)

封面形象展示了一种空间变分辨率扫描原理,外围低分辨率可以覆盖更广的视场,内环扫描分辨率更高,从而在保证目标重构精度的条件下,有效减少了场景的扫描点数,提升了激光三维成像的数据利用率,为无人驾驶、目标检测识别等领域应用提供了新思路。

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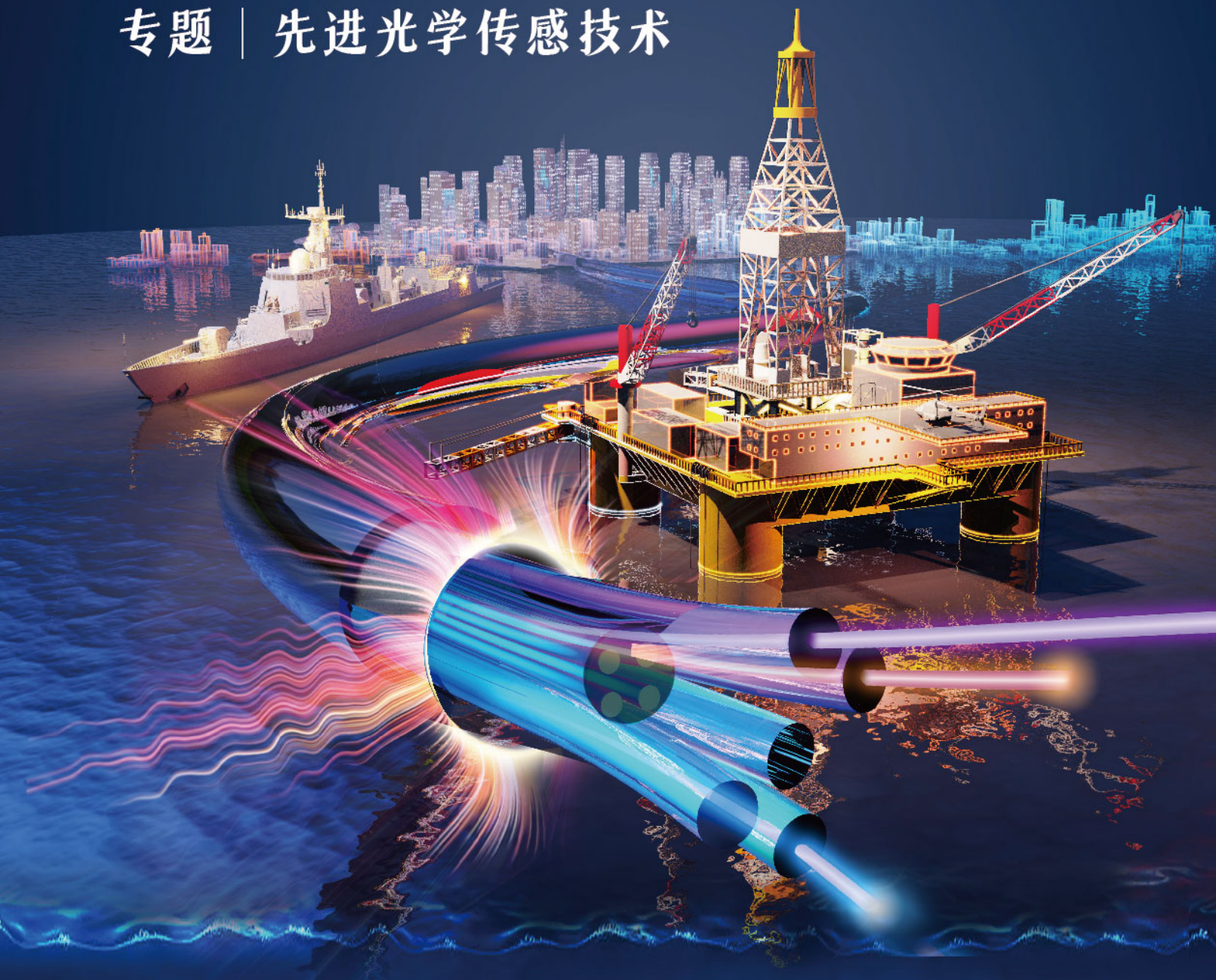


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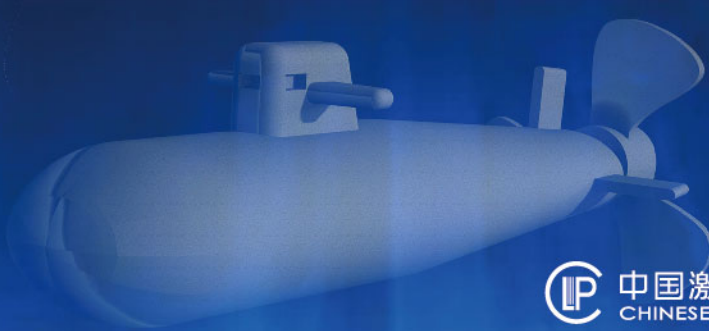
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