

Ming Li

Substance research institute

Li's main research directions are ultra-high-speed photon analog signal processing and microwave photonics technology. In the research of photon analog signal processing technology, a photon analog differentiator of 25 GHz or more of any order has been designed and fabricated. In addition, a photon analog differentiator with a differential processing bandwidth of 25 THz was successfully produced. In the research concerning microwave photonics technology, the multi-wavelength laser source is used to realize the technique of non-coherent microwave signal processing that can be single-shot measurement, which breaks through the technical bottleneck of limiting the strong noise of non-coherent microwave signal processing. By discretizing the incoherent light source (multi-wavelength laser source), the noise signal in the signal processing bandwidth is removed, and the non-coherent microwave signal processing technology capable of single-shot measurement is successfully realized for the first time. In recent years, he has published more than 91 academic papers in academic journals and international conferences (43 SCI papers, including 27 with Li as the first author), with have been cited more than 260 times. Moreover, he has achieved 3 patents.

李明（物质研究院）

主要研究方向是超高速光子模拟信号处理以及微波光子技术。在光子模拟信号处理技术方面，曾设计并制作出任意阶次的 25GHz 以上的光子模拟微分器。另外，还成功制作出创记录的微分处理带宽达到 25THz 的光子模拟微分器。在微波光子技术方面，利用多波长激光源实现了可单发测量的非相干微波信号处理的技术，突破了限制非相干微波信号处理的强噪声的技术瓶颈。通过离散化非相干光源（多波长激光源），去除在信号处理带宽中的噪声信号，首次成功实现了可单发测量的非相干微波信号处理技术。近年来，在学术期刊和国际会议上发表学术论文近 91 余篇（SCI 论文 43 篇，其中第一作者 27 篇），累计他引 260 余次，专利 3 项。