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(57) Abstract :
METHOD AND SYSTEM FOR HARNESSING QUANTUM ENTANGLEMENT FOR BREAKNECK OPTICAL DATA TRANSMISSION
ABSTRACT The invention presents a breakthrough in optical data transmission by leveraging quantum entanglement. The method involves generating entangled photon pairs through a dedicated quantum entanglement source. Information is then transmitted using one or more entangled photons, enabling instantaneous communication. To ensure the security of the transmitted data, the method employs a Quantum Key Distribution (QKD) protocol. The system supporting this innovation, denoted as system 100, consists of a quantum entanglement source (108) designed to produce entangled photon pairs. Optical communication modules (110) encode, transmit, and decode data using entangled photons, while a Quantum Key Distribution (QKD) mechanism (112) guarantees secure data transmission. This invention marks a significant advancement in optical communication, offering unparalleled speed and security through the harnessing of quantum entanglement. FIG. 1

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