Abstract Submitted
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Linked and knotted beams of light WILLIAM IRVINE, Center for Soft Matter Research, NYU, DIRK BOUWMEESTER, UCSB, Physics Department — Maxwell’s equations allow for curious solutions having linked and knotted field lines. A particularly striking solution is one characterized by the property that all electric and magnetic field lines are closed loops with any two electric(magnetic) field lines linked. These little known solutions, are based on the Hopf fibration and have a remarkably simple representation in terms of self-dual Chandrasekhar-Kendall curl eigenstates. I will discuss their structure, time evolution, physical properties and how they may be physically realizable.

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