

Electric Metamaterials

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Since the arrival of negative index, an array of wires has been the standard metamaterial design for achieving negative permittivity. Recently a number of issues have arisen demonstrating that this media is more complex than initially assumed, for example, the behavior of wires terminating on an interface, the importance of continuity between orthogonal wires in multidimensional media, and the transmission of longitudinal modes. Some of these issues point to the desirability of an alternative to wire media. We will discuss some of the recent findings for wire media as well as present an alternative design for achieving electric responding metamaterials.