Zero-index material

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Abstract: In this talk, I will introduce our work on zero-index metamaterial. I will start with a brief review of the effective medium theories [1,2] that we developed to characterize the zero indices, including coherent potential approximation and field averaging, followed by showcasing illustrative examples of zero-index material, including anisotropic zero-index material [3-5] and zero-index material with gain and loss[6]. Their properties, such as cloaking and simultaneous lasing and perfect absorber, will be introduced. Finally, I will mention our recent progress in achieving zero-index materials in three dimensions[7].

References

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