the resulted chiral resonances of the CCMM are shifted to higher frequencies compared to that of the CMM.

4. Conclusions

In conclusion, we have designed and studied a CCMM both numerically and experimentally. The CCMM is composed of a continuous metallic wires structure and a CMM structure that consists of conjugated Rosettes. For the CMM, only a very small useful band of negative index above the chiral resonances can be obtained because of the high value of the effective parameter ε. After the addition of the continuous metallic wires, which provides negative permittivity, the high value of the effective parameter ε can be partially compensated. Thus, a negative index band for the LCP wave is obtained below the chiral resonance for the CCMM. At the same time, a negative index band for the right circularly polarized wave that is above the chiral resonance frequency is also obtained. Furthermore, both negative index bands correspond to the transmission peaks and have high values of the figure of merit. Therefore, the CCMM proposed here is more suitable for the construction of negative index chiral metamaterials.

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