

# Burnett coefficients in a non-periodic class of microstructures

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In this talk, we use Bloch decomposition to introduce a macroscopic quantity, namely the dispersion tensor or the Burnett coefficients in the class of periodic media, as well as in the generalized Hashin–Shtrikman microstructures and we study the dependence of the fourth-order tensor in terms of the microstructure. We first review the results in periodic media, where we deal with the one-dimensional case and also some structures in higher dimension. Then, in the case of two-phase materials associated with the periodic Hashin–Shtrikman structures, we settle the issue that the dispersion tensor has a unique minimizer, which is the so called Apollonian–Hashin–Shtrikman microstructure.

## References

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