

Ultrasonic Investigation of the Pressure-Temperature Phase Diagram of κ -(BEDT-TTF)₂X Quasi-Two-Dimensional Organic Conductors

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Outlines

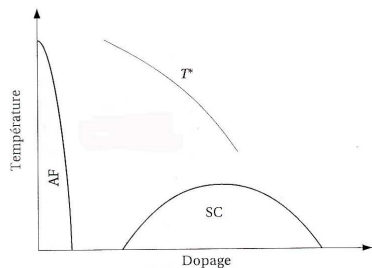
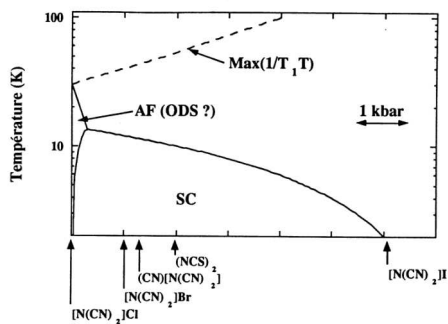
- 1) Ultrasound in organic conductors:
motivations and goals
- 2) Structural and physical properties:
 κ -(BEDT-TTF)₂X compounds
 κ -(BEDT-TTF)₂Cu[N(CN)₂]Cl phase diagram
- 3) Ultrasound experiment
adaptation of the pulse echo method
pressure measurements
- 4) Results and discussion
 κ -(BEDT-TTF)₂Cu[N(CN)₂]Br, κ -(BEDT-TTF)₂Cu(SCN)₂
first ultrasonic measurements in a pressure cell using a liquid

 κ -(BEDT-TTF)₂Cu[N(CN)₂]Cl
recent ultrasonic measurements in a pressure cell using helium
gas
- 5) Conclusions

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1. Ultrasound in organic conductors: motivations and goals

- Similarity of κ -(BEDT-TTF)₂X salts with HTSC

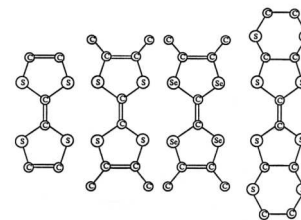


- Quasi-two-dimensional systems
- Unconventional superconductivity
- No ultrasonic measurements: crystals too small

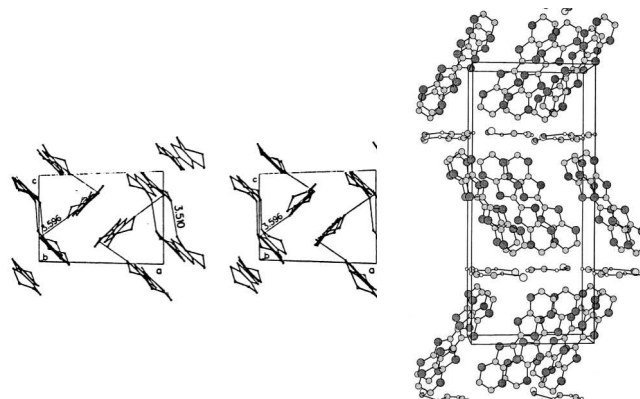
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2. Structural and physical properties

- TTF, TMTTF, TMTSF, BEDT-TTF molecules



two-dimensional κ -(BEDT-TTF)₂X compounds



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