

COMET: K-Project

Micromat	
Reliability of Material Interconnects in Electronics	
Main location	Vienna
Other locations	
Research programme	<p>Development of innovative accelerated mechanical testing procedures for microelectronic interconnects based on physics of failure with respect to steady ongoing miniaturization and increased complexity and packaging density:</p> <ul style="list-style-type: none"> - Detailed characterization of the complex interconnect microstructure as function of variation of production parameters and material combinations - Application and optimization of fast innovative mechanical test techniques replacing standardized thermal testing for lifetime determination of interconnects - Development of non destructive evaluation methods based on vibrational and modal analysis using shaker systems - New life time and reliability models of interconnects based on analytical and simulation methods
<p>Planned realisation and outcomes Development and application of innovative accelerated mechanical reliability assessment methods, tailored for qualification of a large variety of interconnects, as an alternative to time consuming conventional thermal test procedures supported by material science concepts. The knowledge gained within this project will be implemented during the design and manufacturing process to assess improved interconnect quality and long time reliability and to gain technological and scientific leadership in automotive and energy sector.</p>	
History of establishment	New establishment based on FFG Bridge Project No. 811022/9455 – SCK/SAI
Selected company partners	<p>Selected scientific partners</p> <ol style="list-style-type: none"> 1. Infineon Technologies Austria AG - Villach 2. LB-acoustics Messgeräte GmbH - Vienna 3. Siemens AG Austria, SIMEA - Vienna. <p>Selected international partners</p> <ol style="list-style-type: none"> 1. Infineon Technologies AG, Warstein - Germany 2. Polytec GmbH, Waldbronn - Germany
Start Date	01-05-2010
Planned number of personnel	13 (FTE)
Total costs ¹	EUR 1.280. 000
Leader of consortium:	University of Vienna, Faculty of Physics, Physics of Nanostructured Materials, Dean: Prof. Dr. Christoph Dellago
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¹ First funding period: K1-Centres: 4 years, K2-Centers: 5 years;