

Our aim in the present work is to provide and evaluate AC and DC characteristics of the polyaniline based materials. Different experiental techniques and devices have been used to achieve this goal. An introduction to the theoretical concepts of conductivity is given as well. The core of this thesis is an investigation of temperature and low pressure dependences, as well as the ageing effects for two systems (composites) in respect of the different preparation conditions such as dopants and their molar concentration, origin and the content of inorganic component and the way of polymerisation. An agreement with theoretical models is discussed.