

Research Projects

Current research projects

- Al7075 joins Ti-6Al-4V with Plasma Spark Sintering Technology (NPST Project)
- Surface modifications of femtosecond laser sensors to enhance detection of hazardous trace materials (PhD research project)
- Project Kacst AT 34-174.

Previous research projects

1. The Effect of Gamma Radiation on the Physical and Mechanical Properties of Polyethylene B Manufactured by SABIC, Nasser Al-Zayed and Mohammad Shihabuddin, a. Muezzin, 1998, closed. (50,000 SR).
2. Mechanical and thermal properties of YBCO superconductors, (1420H), (by KACST), Nasser Saleh Al-Zayed, closed (100,000 SR)
3. Structural, Mechanical and Thermal Properties of Superconductors YBaCuO, Nasser Saleh Al-Zayed, Ziad D. Egyptian, 1996, closed.
4. Study of Magnetic Properties of Superconducting Materials Made of YBCO with a Focus on Flux Jumps, Nasser Saleh Al-Zayed, by Research Center, 1429H (30,000 SR) Closed.
5. Magnetic Attenuation of Superconductor Tubes $\text{Bi}_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_8 + \text{d}$, Nasser Saeed Al-Zayed, Research Center, 1420H (SAR 30,000)
6. Design and Fabrication of a Magnetometer to Investigate the Precision Hall for Measuring Magnetism and AC Sensitivity of Highcc

Conductors, Nasser Saleh Al-Zayed, Mohammad Shihabuddin, Research Center, 2004

7. Design and Manufacture of High Sensitivity AC Sensitivity Meter, Nasser Saleh Al-Zayed, Mohammad Shihabuddin, Research Center, 2004 (SAR 45,000)

8. Effect of Carbon Doping on Magnetic Properties of Superconductors MgB₂, Mohammed Shihabuddin, Nasser Saleh Al-Zayed, by Research Center 2005 (SAR 45,000)

9. Effect of nanoparticle substitution on the electrical and magnetic properties of superconductors of magnesium diporide, m. Shihab Al-Din, Nasser Saleh Al-Zayed, Research Center, 2006 (50,000 riyals) Closed

10. Preparation and study of the magnetic and electrical properties of Fe₃O₄ nanoparticles conductive anesthetic MgB₂ anesthetic, Nasser Saleh Al-Zayed, Mohammed Shihabuddin, election Ansari, by the Research Center, 2006 (50,000 riyals)

11. Enhance critical current density and mechanical strength of MgB₂Superconductors via hydrocarbon / carbohydrate stimulants. Currently, Mohammed Shihabuddin, Nasser Al Zayed, from the Center for Excellence in Engineering Materials Research, (650,000 Saudi riyals). Closed

12. Synthesis and Measurement of Magnetic and Electrical Properties of CNT- MgB₂ Nanoparticles, Nasser Saad Al-Zayed, Mohammad Shihabuddin, King Abdullah Institute of Nanotechnology, (850,000) Closed

13. Photochemical Absorption of New Calcogenide Crystals, Nasser S. Zayed, I.V. Kityk, A. M. Al-Najjar, supported by the Deanship of Scientific Research, King Saud University. (2010) Present

14. Modification and Electromagnetic Properties of MgB₂ Superconductors by NanoMaterials Doping for Application in Higher Magnetic Field, National Plan of Science and Technology, Nasser Saleh Al-Zayed, M. Shahabuddin, M. Asif, NPST (1, 920,000 SAR) Now

15. Development of superconducting wires for high-load applications using MgB₂, M. Shahabuddin, Nasser S. Alzayed, M. Asif, NPST (1,650,000 SR). (Closed)

16. Combination of a new class of rare earth iron-based Oxyarsenide SmFeAsOF Superconductor, Faculty of Science Research Center, Nasser Saleh Al-Zayed, Mohammad Shihabuddin. Ansari election. unacceptable

17. Synthesis of MgB₂ thin film using pulsed laser deposition system for application of devices, Nasser Saad Al-Zayed, Mohammed Shihabuddin, F. Kitk, a. Mohammed Al-Najjar, NPST (1950.00 SAR). Stream.

18. Current limiting mechanism and potential superconductors for magnesium dioxide (MgB₂) for application, introduction to KACST (2013) SR 1,989,000. (Stream)