



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014

تقنية المواد المتقدمة ADV Technology

Serial Number	Proposal Code	Proposal Title
1	14-ADV2447-02	Development of metal-organic framework based materials as a composite stationary phase for chromatographic applications



الخطة الوطنية للعلوم والتقنية والابتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014



Serial Number	Proposal Code	Proposal Title
1	13-AGR1925-02-R	Diversity of Spider Mites (Prostigmata: Tetranychidae) based on morphology and genetic variations in the Kingdom of Saudi Arabia
2	13-AGR2072-02-R	Biodiversity and Conservation of Desert Truffles in Saudi Arabia to Reduce the Desertification
3	13-AGR893-02-R	Simulation of the Transportation Effect on Engineering Properties and Losses of Fresh Barhi Dates
4	14-AGR2094-02	Molecular analysis of insecticide resistance in major agricultural pests present in the Kingdom of Saudi Arabia, aiming to support Integrated Pest Management (IPM) strategies
5	14-AGR2276-02	Implementation and assessment of precision tillage and variable rate irrigation techniques for sustainable crop production in the Kingdom of Saudi Arabia
6	14-AGR2277-02	Cordia and Zizyphus Gums: Extraction, Characterization, Application, and Value-added Co-products

الخطة الوطنية للعلوم والتقنية والابتكار – جامعة الملك سعود

<http://Npst.ksu.edu.sa> Npst@ksu.edu.sa

Tel. 01-4696001 Fax. 01-4693877



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014



Serial Number	Proposal Code	Proposal Title
1	14-BIO2051-02	A Synthetic Biology approach for the sustainable exploitation of diatom highly branched isoprenoids as pharmaceuticals and biofuels.
2	14-BIO2431-02	Cloning the Endanger Arabian Oryx via Somatic Cell Nuclear Transfer Technology Into Domestic Cow Oocytes



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014



Serial Number	Proposal Code	Proposal Title
1	14-BUI2262-02	Development of Sustainable, Ultra High Performance Hybrid Fiber Reinforced Cementitious Composites Utilizing Locally Available Materials for Applications in Harsh Saudi Arabian Environment



الخطة الوطنية للعلوم والتقنية والابتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014

تقنية الإلكترونيات

ELE Technology

Serial Number	Proposal Code	Proposal Title
1	14-ELE2269-02	2 um Laser for LIDAR Applications Based on Multichannel Brillouin Fiber Laser Technology



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014



Serial Number	Proposal Code	Proposal Title
1	14-ENE1986-02	Combination of dye-sensitized solar cells and ferroelectric metal oxide nanocomposite to enlarge photovoltaic effect
2	14-ENE2312-02	Charging Algorithms for Electric Vehicles in Emerging Smart Grids



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014



Serial Number	Proposal Code	Proposal Title
1	14-ENV1934-02	Use of Benign Solvents for the Absorption of CO ₂ .
2	14-ENV2212-02	Biogeography, life features of freshwater planarians from Arabian Peninsula and the paradox of asexuality.
3	14-ENV2458-02	Removal and disposal of toxic heavy metal ions using Date Palm Seeds: An Eco-friendly approach
4	14-ENV2482-02	Monitoring of persistent organic pollutants in different foods (Vegetables, Fruits, Fish) from different areas in Saudi Arabia
5	14-ENV2567-02	Screening of human cell – nanoparticle interaction specific biomarkers for safety risk analysis of nanoscale-food additives

الخطة الوطنية للعلوم والتقنية والإبتكار – جامعة الملك سعود

<http://Npst.ksu.edu.sa> Npst@ksu.edu.sa

Tel. 01-4696001 Fax. 01-4693877



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014



Serial Number	Proposal Code	Proposal Title
1	13-INF2168-02-R	Enhancing Security of Fingerprint Biometrics with Heartbeat Signal for Unattended Applications
2	14-INF2163-02	iNaVI: indoor Navigation for the Visually Impaired using User Centred Design
3	14-INF3139-02	Brain-Computer Interface driven Accessibility for People with Disabilities



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014

$$\left[\frac{-\hbar^2}{2m} \nabla^2 + V \right] \Psi = i \hbar \frac{\partial}{\partial t} \Psi$$

برنامج الرياضيات والفيزياء
MAT Technology

Serial Number	Proposal Code	Proposal Title
1	14-MAT2052-02	NEW STATISTICAL AND RELIABILITY MODELS WITH APPLICATIONS IN BIOLOGY AND ENGINEERING



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014

التقنيات الطبية والصحية

MED Technology

Serial Number	Proposal Code	Proposal Title
1	13-MED1948-02-R	Effect of Motor Vehicle Pollution on Lung Functions, Fractional Exhaled Nitric Oxide Levels and Cognitive Functions of Children and Adolescents Studying in Schools in Traffic-Congested Areas in Riyadh, Saudi Arabia
2	14-MED1893-02	Physiological and pathophysiological significance of chorein
3	14-MED1942-02	Insulin Therapy Reduces Postoperative inflammatory response after curative Colorectal Cancer resection: Randomized Controlled Trial
4	14-MED2097-02	Neurophysiological measures as end-point in multiple sclerosis clinical trials: the use of Transcranial Magnetic Stimulation
5	14-MED2329-02	Changes in food preference and eating behaviour following Vertical Sleeve Gastrectomy in adolescents
6	14-MED2817-02	Studies on frequencies and disease progression potential of candidate Lymphoid and Myeloid lineage gene mutations in Chronic Myeloid Leukemia Lymphoid and Myeloid blast Crisis CD34+ stem cells

الخطة الوطنية للعلوم والتقنية والإبتكار – جامعة الملك سعود

<http://Npst.ksu.edu.sa> Npst@ksu.edu.sa

Tel. 01-4696001 Fax. 01-4693877



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014



Serial Number	Proposal Code	Proposal Title
1	14-NAN2221-02	High strength nanofiber composite via supersonic nanoblowing for ground and aviation vehicles
2	14-NAN2323-02	Development of Advanced Nanostructured Bismuth Vanadate (BiVO ₄) Photoelectrodes for efficient solar water splitting
3	14-NAN2367-02	GREEN NANOTECHNOLOGY IN CATALYSIS: PLANT EXTRACT MEDIATED SYNTHESIS OF NANOPARTICLES AND THEIR CATALYTIC APPLICATIONS
4	14-NAN2612-02	Design and development of energy efficient and highly scalable SOI based tunnel-FET devices for nanoelectronics applications



الخطة الوطنية للعلوم والتقنية والإبتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014



Serial Number	Proposal Code	Proposal Title
1	14-PET2359-02	Desulfurization of Fuel Oils by Improved Coupled Extractive-Oxidative Technology using Ionic Liquids



الخطة الوطنية للعلوم والتقنية والابتكار

The National Plan for Science, Technology and Innovation

List of Recommended Proposals – September 2014

تقنية الفضاء والطيران

SPA Technology

Serial Number	Proposal Code	Proposal Title
1	13-SPA1130-02-R	3D Formation Control in a Heterogeneous Multi-Robot System using Swarm Intelligence in a Hazardous Unstructured Environment
2	14-SPA2287-02	Crop acreage, production estimation and water footprint analysis of major agricultural crops cultivated in Saudi Arabia

الخطة الوطنية للعلوم والتقنية والابتكار – جامعة الملك سعود

<http://Npst.ksu.edu.sa> Npst@ksu.edu.sa

Tel. 01-4696001 Fax. 01-4693877