

Smart "Band-Aid"-Like Health Monitors

Developed by Prof. Hossam Haick and postdoctoral fellows Youbin Zheng and Rawan Omar

These wearable patches with pain-free microneedles monitor medical conditions and relay data to the patient and doctor. Measuring components like sodium, glucose, and pH levels, they might prevent heart and kidney diseases, and more. Photo Credit: Freepik.com

Electricity from the Sea

Developed by Technion Ph.D. candidate Yaniv Shlosberg and the Limnological Research Institute

Researchers used common seaweed to harvest electrical currents from the sea that are as powerful as standard solar cell technologies and even more environmentally friendly. Photo Credit: Adobe Stock



Engineering an Ear

Developed by Prof. Shulamit Levenberg with Sheba Medical Center

This new technology creates custom-made. functional, 3D-printed ears for those born with malformations of the external ear, avoiding painful reconstruction methods that use cartilage from the patient's chest. Photo Credit: Technion

Technion

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Self-Repairing Electronics

Developed by Asst. Prof. Yehonadav Bekenstein

Self-repairing robots abound in sci-fi movies. Now Technion scientists have created nanocrystals that could be incorporated into electronics and orbiting solar panels to heal themselves. Photo Credit: Adobe Stock

Agricultural

Indoor Farming

Developed by

Technion alumni

Adi Nir '00, M.S. '08 and

CEO and CTO,

respectively, MetoMotion

MetoMotion's fully

autonomous system

uses advanced AI,

3D vision, and data

science to identify,

pick, and pack ripe fruit.

Photo Credit: MetoMotion

Telescope dimensions in space have always been limited by the size of the launcher. Now, an Israeli astronaut has used fluids to create lenses in space up to 100 times bigger than traditional telescopes, enabling deeper space exploration.

Developed by CollPlant Biotechnologies, led by alum Yehiel Tal '79, M.S.'82, with United Therapeutics Corporation

Protein in the leaves of tobacco, plants associated with devastating disease, is being extracted to manufacture 3D-printed kidneys. The artificial kidneys could save the lives of patients waiting on donor transplant lists. Photo Credit: Adobe Stock

"Sensing" Machine Breakdowns

Developed by Feelit Technologies Ltd., founded in the Technion DRIVE accelerator by Prof. Hossam Haick and alumni Meital Segev-Bar '10, Ph.D. '17, and Gady Konvalina '07, M.S. '11, Ph.D. '14

Feelit prevents costly machinery failures with innovative sensors that monitor pressure, temperature, vibration, leakage, wall integrity, and other industrial parameters

of pipes, pumps, and valves. Photo Credit: Feelit Technologies Ltd.





INNOVATIONS

Breakthrough in Alzheimer's Research

Developed by Prof. Galia Maayan and Ph.D. candidate Anastasia Behar with French scientists

Researchers have created a new, artificial molecule that suppresses the formation of free radicals that damage brain cells, inhibiting the progression of Alzheimer's.

Photo Credit: Adobe Stock

Telescopes Made with Fluids Revolutionize Space Optics

Fluidic Telescope Experiment (FLUTE) developed by Prof. Moran Bercovici with NASA's Edward Balaban

Photo Credit: Studio Ella Maru

3D-Printed Kidneys





Steering Surgical Needles to Their Target

Developed by Asst. Prof. Oren Salzman with scientists from the University of North Carolina

A new algorithm guides medical needles safely and precisely through the body to do biopsies and other treatments in difficult-to-reach areas behind bones or vulnerable tissue.

Photo Credit: Technion