

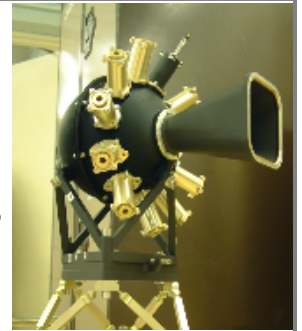
Acktar Ltd.

Advanced Coatings

PRESS RELEASE

November 20th, 2008

ACKTAR LTD. IS THE SUPPLIER OF CHOICE PROVIDING ADVANCED BLACK IR ABSORBING COATINGS FOR THE NIR INFRARED SPECTROGRAPH (NIRSpec) - 'SUPER-EYE' INSTRUMENT FOR THE JAMES WEBB SPACE TELESCOPE (JWST)



Coated Calibration Assembly
Courtesy of Mullard Space Science - UK

The "James Webb Space Telescope" is a large, infrared-optimized space telescope, scheduled for launch in 2013. This mission involves international cooperation between NASA, ESA and the Canadian Space Agency (CSA). JWST is the successor to "Hubble" space telescope.

Acktar Ltd. is successfully delivering black Infrared absorbing coatings on various parts of the **NIRSpec Instrument** to ESA / EADS- Astrium and numerous European sub-contractors in the ESA consortium. ACKTAR was chosen in 2007 by **ESA / EADS-Astrium** - after extensive testing – as the "Supplier of Choice", responsible for the design, manufacture, and testing of the black absorbing coatings for a broad variety of parts of the NIRSpec Instrument. ACKTAR has a strong heritage in providing advanced black absorbing coatings of critical components for Infrared applications. The European Space Agency (ESA) will be providing the NIRSpec Instrument for the JWST program and ESA awarded EADS- Astrium the contract to build the NIRSpec 'super-eye'. This 200 kg spectrograph will be able to detect the faintest radiation from the most distant galaxies and measure spectra of more than 100 objects simultaneously. In order to do this, the instrument must be able to operate at a temperature of -238 degree Celsius. The NIRSpec operates in the wavelength range of 0.6 to 5 microns. The study of galaxy formation, clustering, chemical abundances, star formation, and kinematics, as well as active galactic nuclei, young stellar clusters, and measurements of the initial mass function of stars (IMF) requires a near-infrared spectrograph. For additional background information please refer to:

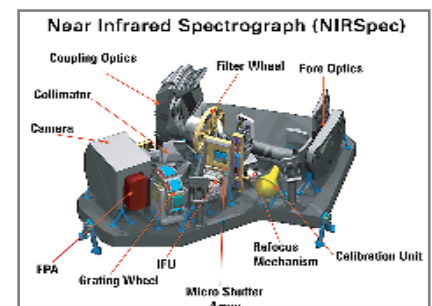
<http://www.astrium.eads.net/families/universe-space-solar-system-exploration-probes/wider-universe/jwst>

<http://sci.esa.int/science-e/www/area/index.cfm?fareaid=29>

Acktar Ltd. (www.acktar.com) is an industrial nanotechnology company established in 1994, Headquartered in Kiryat Gat - Israel, and with subsidiaries in Germany – ACM Coatings GmbH and in Japan – Acktar Japan Ltd. Acktar's core competence is the development and manufacture of extremely black coatings using proprietary Physical Vapor Deposition (PVD) based processes. The coatings can be deposited on virtually any substrate material and can achieve absorptance (specular) of above 99% in the UV, VIS and IR spectra. Acktar's coating processes are totally environmentally friendly and are in use by leading companies throughout the world in applications such as optical equipment, IR sensors/ systems, aerospace systems and solar thermal absorbers.



Acktar Vacuum Coating Department



NIRSpec Instrument

Courtesy of Max-Planck-Institut für Astronomie