





Spectroscopy Chip.

Erosion occurs on very small scales. Scientists and engineers use beams of energetic particles in a controlled erosion process to create microscopic structures for smart phones, and other nano-technology devices.

(Credits: Wikimedia Commons)

Desert.

On a larger scale, the effects of wind, rain and gravity combine to form the spectacular buttes and spires in southwestern deserts of the United States. The rock pillars in Pinnacles National Park in Australia are almost a billion times larger than the nano-pillars on microchips. They are thought to have been formed by erosion as water washed away the material not protected by erosion-resistant cap rocks.

(Credits: Wikimedia Commons)

Gas Pillars in the Eagle Nebula (M16).

Erosion also takes place on a cosmic scale in interstellar space, forming the "Pillars of Creation" in the Eagle Nebula and similar structures in the Carina Nebula. Ultraviolet radiation and winds from nearby stars blew away gas from interstellar clouds, leaving behind dense columns of gas and dust several light years long.

(Credits: NASA, ESA, STScl, J. Hester and P. Scowen (Arizona State University))

PILLARS OF EROSION The relentless action of winds slowly carve away at the environment, leaving behind sculptures from erosion. Microchip fabrication uses particle beams to erode material and create structures on the surface. Prolonged wind erosion in deserts leaves behind columns of dense rock. Winds from bright stars blow away their surroundings to unveil dense regions of gas from which stars are forming.

www.nasa.gov http://hte.si.edu/erosionmore

BECAUSE WHAT HAPPENS HERE,
HAPPENS THERE,
HAPPENS EVERYWHERE.

