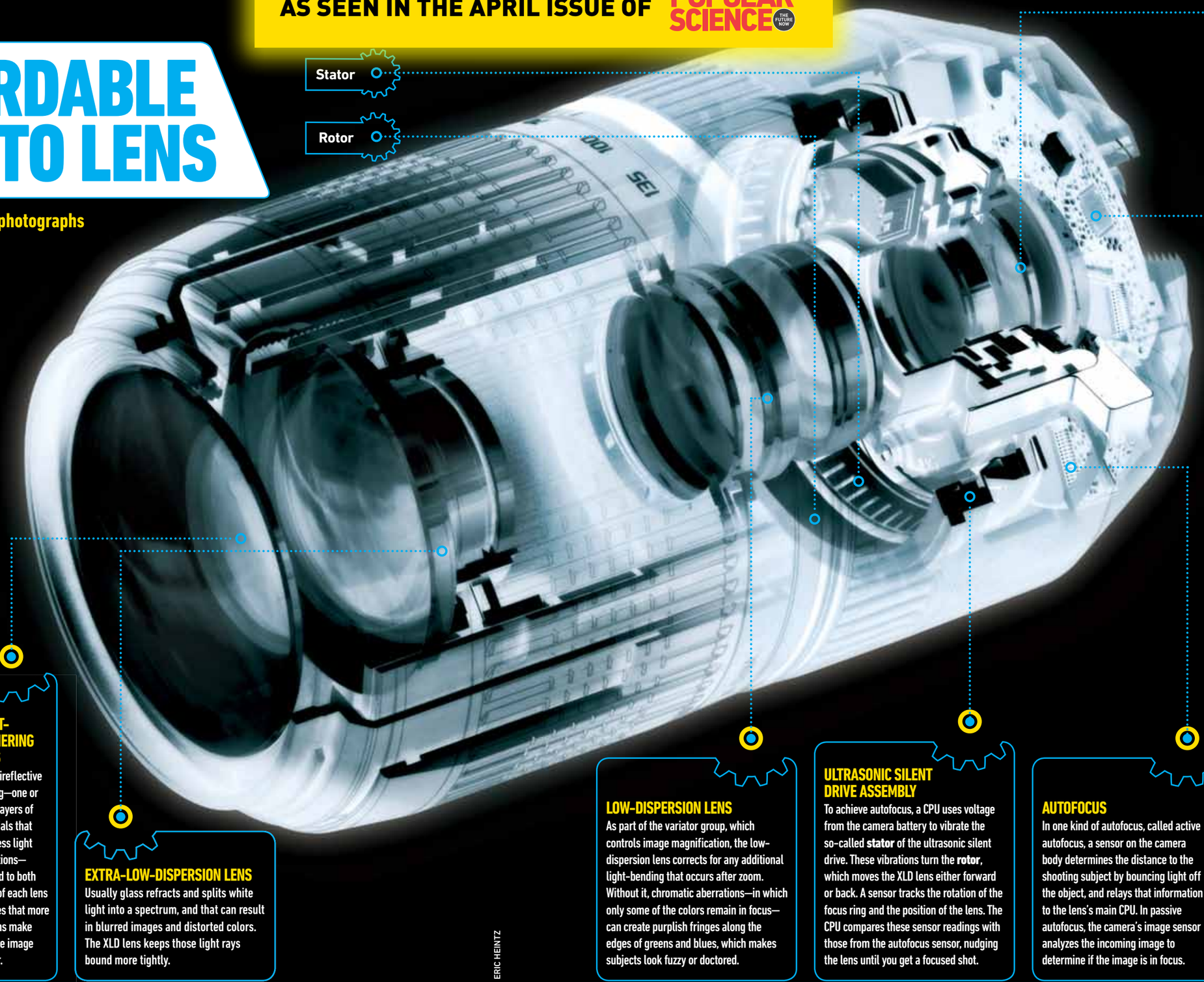
AS SEEN IN THE APRIL ISSUE OF POPULAR SCIENCE

AN AFFORDABLE TELEPHOTO LENS

How 17 pieces of glass create clear photographs of the moon—or a blade of grass

One of the most important parts on any camera is the lens assembly. This collection of glass pieces bends light so that the image arrives at the image sensor in sharp focus. Zoom lenses such as Tamron's SP 70-300mm give photographers the flexibility of several lens assemblies—from a wide-view to a supertelephoto—in one. Such clarity often comes at a cost: Some supertelephoto lenses go for $10,000 or more, in part because their manufacturers use expensive fluorite lenses to correct for color aberrations. The SP 70-300's secret weapon is its extra-low-dispersion glass lens, which produces extremely sharp images at a far lower cost. Here's how that glass lens works together with the rest of the assembly to create clear pictures without breaking the bank.—AMANDA SCHUPAK



ERIC HEINTZ

Inside the Telephoto Lens

SPECS

Focal length: 70–300 mm
Aperture range: F/4–F/45
Length: 5.9 inches
Weight: 1.7 pounds
Minimum focal distance: 4.9 feet
Price: $450