Over hundreds of years, science has learned a lot about manipulating light. And while lasers and liquid crystals might seem pretty sophisticated, some of God's creatures show us how much more there is to learn.

The Morpho butterfly is one of the brightest butterflies in nature, but looked at closely in artificial light, it appears dull gray-brown. However, in the sunlight its color changes to a bright blue.

It can do this because the scales on its wings form a type of diffraction grating called a photonic band gap. This diffraction grating is formed by a precise spacing of the scales so that they are similar to the wavelength of sunlight. When white light hits the grating, it breaks down into its various colors. The red light waves cancel each other out, and all the other colors are scattered, except the blue. As a result, the blue color never fades, and it is so intense that it can be seen up to half a mile away. Scientists comment that we do not yet know how to make an optical structure this complex.

The Morpho butterfly, with all its precise engineering, is a testimony to the skill and love of beauty of our Creator. He considers holiness the greatest of beauties – a beauty given us through the suffering and death of His Son, Jesus Christ.

Prayer: Thank You, Father, for the light of Your truth and for giving us the beauty of Christ's holiness. Amen.

Notes: Discover, 8/05, pp. 42-47, George M. Whitesides, "Illuminated Life." See also: http://www.bluemorphobutterfly.net/
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