





company. In order to prove the commercial viability in a wide range of applications, Parker designs production methods to protect watch makers from an onslaught on their products by integrating a visual control on the glass that makes recognition easy and cheap.

### **The Opportunity**

The field of applications is vast and the opportunities basically affect every sector of the economy. Perhaps one of the most promising applications short term is crystal for the company Swarovski. The technology of Andrew permits decorative figurines like birds to shine brilliantly; better, these shine brilliantly since the color effect actually uses a procedure borrowed from the bird itself. While this is a rather limited market, it permits a mastering of the versatility of the technique and set a new standard for the market.

The initiative to bring these additional innovations to the market rests with the producers of color. Since Andrew is able to design pigments with a metallic effect in or on a polymer, silica or crystal substrate, those manufacturers that are entering the world market of renewables could well move up the value chain and embark on the creation of novel materials, including plastics with color effects. Renewable plastics have been focusing on low cost and high volume applications like plastic bags and drinking cups which suffer from cut-throat competition in this globalized market, often requesting prospective clients to pay more so they could pollute less.

The combination of plastics from renewable resources (like agricultural, forestry and food waste) with innovations in color generation without pigments or dyes could raise profit margins while securing a broader market penetration due to the innovations described. Now that chemistry is moving from the petrochemistry to bio-refineries, company innovators like Novamont in Italy (bioplastics), or Domsjö (wood-based ethanol) in Sweden, could become pioneers in the merging of industries, embedding the innovations of Parker into the products that adorn our car, home and office. What is needed next are the entrepreneurs who create the niches, so that one can begin to penetrate the market.

Gunter Pauli is the author of the Report to the Club of Rome:  
“Blue Economy: 100 Innovations - 10 years - 100 million jobs” published in 35 languages worldwide.

For further background on the 100 cases: [www.TheBlueEconomy.org](http://www.TheBlueEconomy.org)



Andrew Parker, photo courtesy of Andrew Parker



Birds and butterflies produce color without color pigments, photos © 2010, Pauli / Peacock © Flickr

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