# Tapping titanium's colorful potential

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A new method to color titanium developed by Gregory Jerkiewicz, a professor in the Queen's University Department of Chemistry, uses an electrochemical solution to produce colored titanium, improving on an older, time-consuming and expensive method where heat was used to develop a colored layer. Credit: Queen's University

A new, cost-effective process for colouring titanium can be used in manufacturing products from sporting equipment to colour-coded nuclear waste containers.

"The new method uses an electrochemical solution to produce coloured titanium, improving on an older, time-consuming and expensive method where heat was used to develop a coloured layer," says Gregory Jerkiewicz, a professor in the Department of Chemistry.

Dr. Jerkiewicz's new technique can be finely tuned to produce over 80 different shades of basic colours. In addition, the coloured titanium produced using the new method remains crack-free and stable for many years.

Colourful titanium has the potential to be used in the production of everyday objects like spectacle frames, jewelry, golf clubs and high-

performance bicycles.

Industries including healthcare, aviation and the military could use the technology to create items like colour-coded surgical tools, brightly coloured airplane parts, and stealth submarines made from blue titanium.

Provided by Queen's University