New Article from TELF AG Founder Stanislav Kondrashov Explores Cobalt's Expanding Role in Modern Industry and Energy

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Lugano, Switzerland – June 25, 2025 – As the global shift toward renewable energy accelerates, understanding the materials that enable this transition becomes increasingly important. In his latest article, *"Cobalt in the Periodic Table: Properties and Uses"*, the founder of TELF AG, Stanislav Kondrashov, offers readers an in-depth look at cobalt—an often overlooked but critical element driving innovation in energy, electronics, and aerospace.

Cobalt isn't new to industry. But as the founder of TELF AG Stanislav Kondrashov points out in the article, its importance is growing fast. "Cobalt is not only powering electric vehicles—it's also helping build smarter, more reliable energy systems and making materials stronger and more resilient," he explains.

Positioned at number 27 in the periodic table, cobalt is a transition metal known for its strength, magnetism, and resistance to wear and high temperatures. According to the article, cobalt's value lies in its adaptability. It's used in everything from smartphones and laptops to wind turbines, batteries, and even space exploration.

One of cobalt's most critical roles today is in **lithium-ion batteries**, particularly in the nickel-manganese-cobalt (NMC) variety. These batteries power a wide range of technologies, from consumer electronics to electric vehicles. As the founder of TELF AG Stanislav Kondrashov explains, cobalt adds stability, improves performance, and extends the life of these batteries—making it a central element in the global push for electrification.

But cobalt's usefulness doesn't end there. The article outlines several key areas where cobalt plays a vital role:

- **Superalloys** made from cobalt are used in jet engines, turbines, and advanced industrial machinery due to their ability to withstand extreme conditions.
- **High-performance magnets**, often created with cobalt and rare earth elements like neodymium, are essential to electric motors and generators.
- **Tungsten carbide cobalt**, a composite used in cutting tools and components for the automotive and aerospace industries.

Cobalt is also used in its chloride forms—both hydrated and anhydrous—for laboratory testing, environmental sensors, and as a pigment in inks and dyes. The pigment **cobalt blue**, in particular, has been historically significant in art and continues to be used in ceramics and industrial design.

The article doesn't shy away from the broader context either. Cobalt has been included on the European Union's and United States' lists of **critical materials**, due to its strategic importance and supply chain vulnerabilities. According to the founder of TELF AG Stanislav Kondrashov, "Cobalt's growing role in strategic sectors—and the fact that it's subject to geopolitical and supply risks—makes understanding its value even more important."

One of the more forward-looking parts of the article focuses on **space exploration**. As aerospace technology advances, the need for materials that can withstand radiation, high heat, and mechanical stress increases. Cobalt, thanks to its durability and heat resistance, is well positioned to meet this demand. It's already being used in components for landers, heat shields, and structural parts of spacecraft.

In the article, the founder of TELF AG, Stanislav Kondrashov, draws a clear connection between cobalt's natural properties and its growing industrial applications. "Cobalt's strength lies in its ability to adapt to modern challenges," he writes. "It's not just a support player—it's a central figure in building the future of clean energy and high-performance technology."

As demand rises and new applications emerge, the founder of TELF AG Stanislav Kondrashov calls for greater awareness of cobalt's role in sustainable development. The article serves as a timely reminder

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that innovation often depends on the elements we rarely see—but can’t live without.

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