

## Copper staves off substitution: ICA

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Copper > Research - Jacqueline Holman

***Copper remained the preferred material for a range of applications in 2018, with substitution of the metal by various alternatives at only 0.8% of total use.***

This was the primary finding of research commissioned by the International Copper Association (ICA) and carried out by DMM Advisory Group.

Research author Krisztina Kalman-Schueler said copper-based miniaturisation (meaning electronics getting smaller) had provided a strong defense against substitution.

"In the current cost environment, the key factors impacting substitution are relative material costs, regulations and new technologies," she said.

The study also found largest copper user China's net substitution was the lowest globally at 0.6%, with the country continuing to use the metal as the material of choice in electrical applications.

It attributed the low rate of substitution to specific geographical product trends, copper's ability to deliver high-quality performance and its energy efficiency.

The research found that globally, there might be a very gradual, but overall small increase in substitution and miniaturisation over the next five years.

However, this was not expected to impact copper demand significantly, as it is expected to be offset by a moderate to strong future growth forecast for most products, with automotive wires, electrical motors and building wire, some of the products showing signs of significant growth over the same period.

ICA global manager, market analysis and outreach Colin Bennett said the broad market outlook for copper remained positive.

"The cumulative tiny increases in substitution last year represent a small fraction of total copper use," he said.

"In future, electrification, energy efficiency requirements and e-mobility are just some factors that harbor larger growth opportunities for copper."

### ***Growing demand from smart homes***

Copper demand is also expected to get a growth boost from smart home applications in the next decade or so, as the appetite for smart home systems grows.

Separate research by BSRIA found that that copper demand in smart home applications was set for a sharp increase to 1.5 million tonnes per annum by 2030.

The copper will be used in the 1.6 billion systems expected to be installed by 2030, up from 177.2 million installed in 2018.

"As soon as 2021, copper demand could more than double across the smart home market as increased usage of wiring, electronic components and batteries becomes more prominent," it said.

BSRIA business manager, WMI Anette Meyer Holley said the shows global market growth for smart home systems was forecast to increase to 21% CAGR in 2030 from 2018.

"This is due to both demand and production increases for smart home appliances, ranging widely across different regions, covering voice control, security, energy management, entertainment products and much more," she said.

Bennett said this trend was set to continue.

"As smart homes evolve towards more intelligent and wired structures, in order to ensure system reliability and security, copper will remain the material of choice," he said.