

Secret Behind Korean Double Gold Medalist's Bow: Graphene

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Korean archer Kim Je-deok has become a national sensation by winning two gold medals at the 2020 Summer Olympics in Tokyo.

The youngest member of the national archery team won the medals in the mixed team event and the men's team event. He aimed to bag his third gold in the individual event, but dropped out of the round of 32, losing to [Germany](#)'s Florian Unruh.

Kim's achievement was still outstanding.

Shooting arrows at targets and landing them within only a few centimeters from the bull's eye requires tremendous concentration and precision, from pulling the loaded bowstring to releasing each arrow. But there was more at play than his mental strength and athletic skills. Apparently, there was a secret weapon.

It was his bow, made of a unique material called "[graphene](#)."

His bow was the creation of Korean sports equipment manufacturer [Win&Win](#), based in Anseong, Gyeonggi Province. Win&Win's WIAWIS brand of bows are also made using aluminum, which Jang Min-hee and An San from the women's national team chose to use. The athletes chose between aluminum and graphene bows based on their preferences.

Graphene bows, according to local reports, are so flexible that they can be bent and returned to their original shapes without losing their performance quality. The material is considered better than aluminum in terms of performance.

The reports added that Win&Win previously made bows using carbon nanotubes as their flagship products, but replaced them with graphene. Graphene bows are 60-percent more durable and 20-percent more shock-absorbing than carbon nanotubes.

Graphene was also used by Win&Win to manufacture a line of bicycles that Korean national track cyclist Lee Hye-jin chose to ride in the 2020 Summer Olympics, according to the reports. The material minimizes the shock felt by cyclists while riding, allowing the athletes to maintain stable control. Six other Tokyo Olympians, including those from [Denmark](#) and [Switzerland](#), also chose to use Win&Win's graphene bicycles.

Read the [original article](#) on The Korea Times.