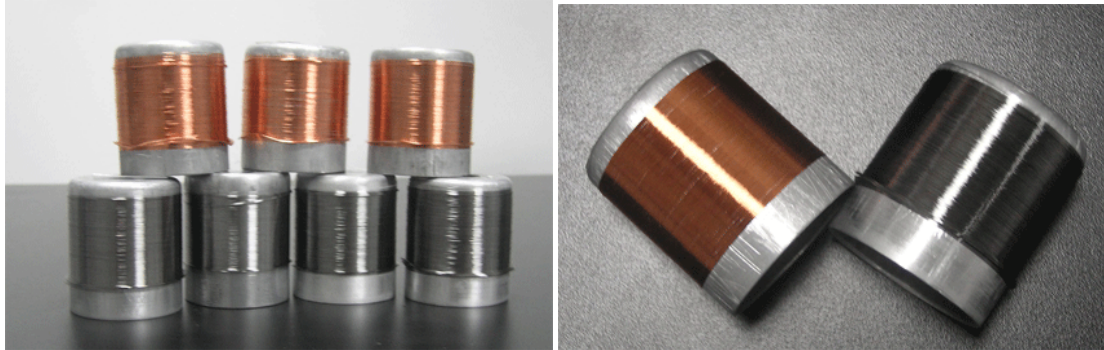


# Micro wires from copper and FeBSi

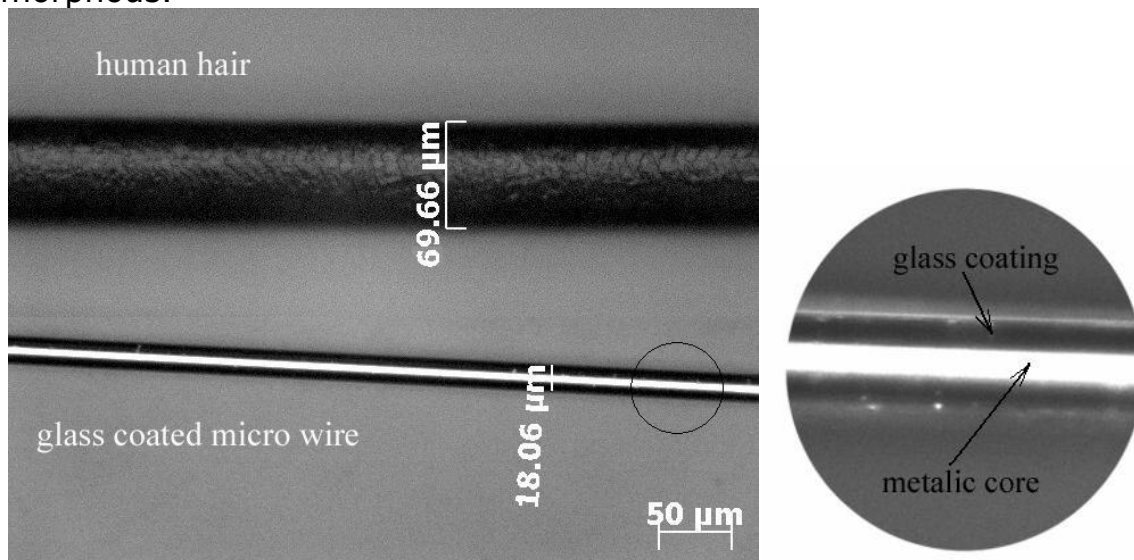
**DESCRIPTION:** Microwire with magnetic properties from different metal (Cu, platinum, cobalt, nickel and others), alloys (FeBSi), semimetals and semiconductors (silicon, germanium).

Micro wire is made from a metallic core in a cylindrical shape which is surrounded by a layer of isolator from glass, the diameter of the metal core can be from 1 to 50  $\mu\text{m}$  and the thickness of the glass coating is from 1 to 20  $\mu\text{m}$ . The length of a micro wire can be 2 - 3 km.



*Different spools with micro wires from Copper and FeBSi*

It can be obtained differently structures of the metal core: polycrystalline with different sizes of crystals (micro crystallites, nano crystallites) and amorphous.



Microscopic view of a micro wire from FeBSi

## **APPLICATIONS:**

The area of applications with micro wire is very large therefore we mention just some:

- magnetic sensors with micro wires;
- electromagnetic shielding;
- anti-shoplifting labels based on glass coated micro wires;
- products and documents authentication, brand protection, and access control;
- under floor heating systems installed directly under all types of floor covering;
- conductors - micro cables for telecommunication;
- miniature high-voltage transformers.