The Office of Technology Management

UNIVERSITY OF TEXAS ARLINGTON

Tech ID: UTA 11:42

Anisotropic Bonded Magnets

INVENTOR: J. Ping Liu

TECHNOLOGY NEED

Consumers demand efficient electronic devices. From our automotive and power industries we expect "cleaner" power generation or "greener" energy production. One step toward meeting these requirements is improving the capabilities of the permanent magnets used in these applications. These permanent magnets are created by sintering or bonding. Although bonding is more advantageous for smaller applications the power density ratio is poor. Sintering allows for more than two times the energy product out of the same material in some cases.

INVENTION DESCRIPTION/SOLUTION

Researchers here at UTA have developed a process that allows for bonded permanent magnets to have increased energy products. The process can be scaled up to industrial production with a low cost. The increased energy products from these bonded permanent magnets are achieved by offering more alignment to the chip-like nanoparticles used to create the final magnet.

APPLICATIONS

- Consumer Electronics
- Automotive
- Appliances and HVAC

KEY BENEFITS

- Process to create anisotropic permanent magnets
- Low cost to scale to industrial production
- Increase the energy product of bonded magnets

STAGE OF DEVELOPMENT

Prototyped & Lab tested

INTELLECTUAL PROPERTY STATUS

Patent Pending

RELATED TECHNOLOGY

09-39 Nano-Wire Composite Magnets

14-52 Nano-Wire based Permanent Magnets

More about the Inventor:
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