

Pressurized Glassy Materials for Innovative Energy Storage and Conversion

In the 21st century, it is important to search for new forms of energy storage and conversion. This is due to a small amount of elements used in the production of energy cells. The search for new sources of base materials forces mankind to travel to space, which significantly increases the cost of producing elements of energy systems.

However, it is possible to look for solutions using the available substrates for the production of cells and their components. Glassy materials seem to be promising due to their numerous unusual properties, which include high mechanical strength and high electrical conductivity. The use of an innovative method of forming glassy materials with the use of high pressure enables the production of materials with much better physical properties. The most important aspect of the HP process is the increase in electrical conductivity, which is extremely desirable from the point of view of energy storage and conversion. Additionally, the produced material has increased hardness and flexibility, which allow for its further forming.