Title: ACTIVE MATERIAL FOR RECHARGEABLE BATTERY

Abstract: An electrochemical device, such as a magnesium-ion battery, comprises a first electrode including a first active material, a second electrode, and an electrolyte located between the first electrode and the second electrode. The electrolyte may include a magnesium compound, such as a magnesium salt. In representative examples, an improved active material includes a group 15 chalcogenide, in particular a bismuth chalcogenide, such as bismuth oxide or other chalcogenide. In various examples, the improved active material may be used in a positive or negative electrode of an example battery.