New Possibilities for Hydrogen Transport

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Most countries are relying on being able to use hydrogen technology within the energy transition. This should make "green" hydrogen marketable and enable its industrial production, transportability and usability. The most sensible place to produce green hydrogen is where there is enough renewable energy available to operate water electrolysis, for example, Egypt, Algeria and Morocco. Depending on the amount of hydrogen to be transported, different transport methods make sense. For large volumes over short distances, hydrogen pipelines are the best option. However, for medium and longer distances, other methods could be used. This means that hydrogen can be transported under high pressure, liquefied, bound to a carrier liquid, or in the form of hydrogen derivatives. However, each method has its advantages and disadvantages. For transport over longer distances, a chemically bound form such as ammonia (NH_3) or borazane (H_3B-NH_3) seems to make the most sense. In this presentation, the advantages of borazane over ammonia will be discussed in this context, and solutions to possible problems will be evaluated.