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Excitons in AlN under pressure. NIELS E. CHRISTENSEN, Dept. of Physics and Astronomy, University of Aarhus, DK-3000 Aarhus, Denmark, ROBERT LASKOWSKI, Inst. of Mterials Chemistry, Techn. University of Vienna, A-1060 Vienna, Austria — First-principles calculations based on solution of the Bethe-Salpeter equation of excitons in the high-pressure AlN phase show that a delocalization-localization transition occurs as additional pressure is applied. The transition, which is associated with a sudden increase in exciton binding energy, is related to a pressure-induced rearrangement of the energy bands.

Niels E. Christensen
Dept. of Physics and Astronomy, University of Aarhus, DK-8000 Aarhus C

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