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Electronic and Optical properties of Si_3Al(P, As)

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Abstract content
   (Max 300 words)

A method based on the TB-LMTO-ASA and the Quasi Self consistent-GW (QSGW) approximation is used to investigate the electronic and optical properties of the newly synthesized silicon-like Si_3Al(P, As). These are crystalline materials made of Si, AlAs and AlP, all retaining their tetrahedral bonds. We compared the optical properties of these new IV/III-V semiconductors to those of bulk Si.

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