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## Electronic and Optical properties of $\text{Si}_3\text{Al}(\text{P}, \text{As})$

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### Abstract content <br> &nbsp; (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  $\text{Si}_3\text{Al}(\text{P}, \text{As})$ . 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.

### Apply to be<br> considered for a student <br> &nbsp; award (Yes / No)?

No

### Would you like to <br> submit a short paper <br> for the Conference <br> Proceedings (Yes / No)?

Yes

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