

**substance:**  $\text{Mn}_n\text{Si}_{2n-m}$

**property:** energy gap, effective masses of  $\text{Mn}_{11}\text{Si}_{19}$ ,  $\text{Mn}_{26}\text{Si}_{45}$

**energy gaps**

$E_{g,\text{th}}$	$\approx 0.5 \text{ eV}$	$T = 0 \text{ K}$	from $\log \rho \propto E_g/2kT$	69I, 69N1, 72A, 72U 69N2
	$0.8 \text{ eV}$	$T = 0 \text{ K}$		
	$\approx 1 \text{ eV}$	$T = 0 \text{ K}$	from $\log \rho \propto E_g/2kT$ and $S(T)$	74A
$E_{g,\text{dir}}$	$0.66 \text{ eV}$	RT	from optical absorption	79Z

Near the edge of the valence band there is a narrow d-band whose effective electron mass is 100 times greater than the effective mass of holes [74A].

**effective masses**

$m_n$	$> 10^3 m_0$	$T = 300 \text{ K}$		69N2
$m_p$	$10 m_0$	$T = 300 \text{ K}$		69N2
	$3.3 m_0$	$T = 300 \text{ K}$		74A
	$2.7 m_0$	$T = 300 \text{ K}$	density of states mass	69N1
	$3.2 m_0$	$T = 650 \text{ K}$		

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