Chapter 36
Structure of domain boundaries: metals: W

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See Table 36.1.

Table 36.1 W

Miller index	Superstructure	Major experimental techniques	Supporting experimental techniques	Sample preparation	Results Remarks	Ref.	Fig.
(001)	$(\sqrt{2} \times \sqrt{2})R45°$	LEED	AES work function	Annealing in O_2 at 1700 K; Flash annealing at 2500 K in UHV	Existence of thermally induced DBs *Deduced from diffraction peak broadening*	[79Deb]	
		HAS	–	Annealing in O_2 at 1400 K; Flash annealing at 2300 K in UHV	Dense DWs at 320 K *Concluded from broadening and shift of superstructure diffraction peaks*	[86Sal]	

Symbols and abbreviations

Short form	Full form
HAS	helium atom scattering
LEED	low-energy electron diffraction
UHV	ultrahigh vacuum
AES	Auger electron spectroscopy
DW	domain wall
DB	domain boundary

References

[79Deb] Debe, M.K., King, D.A.: Surf. Sci. **81**, 193 (1979)
[86Sal] Salanon, B., Lapujoulade, J.: Surf. Sci. **173**, L613 (1986)

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