TABLE I: The lattice constant in the c axial direction, the electronic ground state (BS), the band gap for semiconductor and half metal cases, the total supercell magnetic moment (M) per TM and valence electron distribution (VED) of $[TM_2(Ant)]_\infty$ (TM= Sc, Ti, V, Cr, Mn and Fe).

meV	c(Å)	GS	band gap (eV)	M(μ_B)	VED
Sc	7.89	*NN*(metal)	0.00	0.00	$3d^1 4s^2$
Ti	7.37	*FA*(metal)	0.00	0.00	$3d^2 4s^2$
V	7.01	*FF*(half metal)	0.76(direct)	2.00	$3d^3 4s^2$
Cr	6.79	*FF*(half metal)	1.25(direct)	0.96	$3d^4 4s^2$
Mn	6.64	*NN*(semicond)	0.66(direct)	0.00	$3d^5 4s^2$
Fe	6.87	*AF*(metal)	0.00	0.00	$3d^6 4s^2$