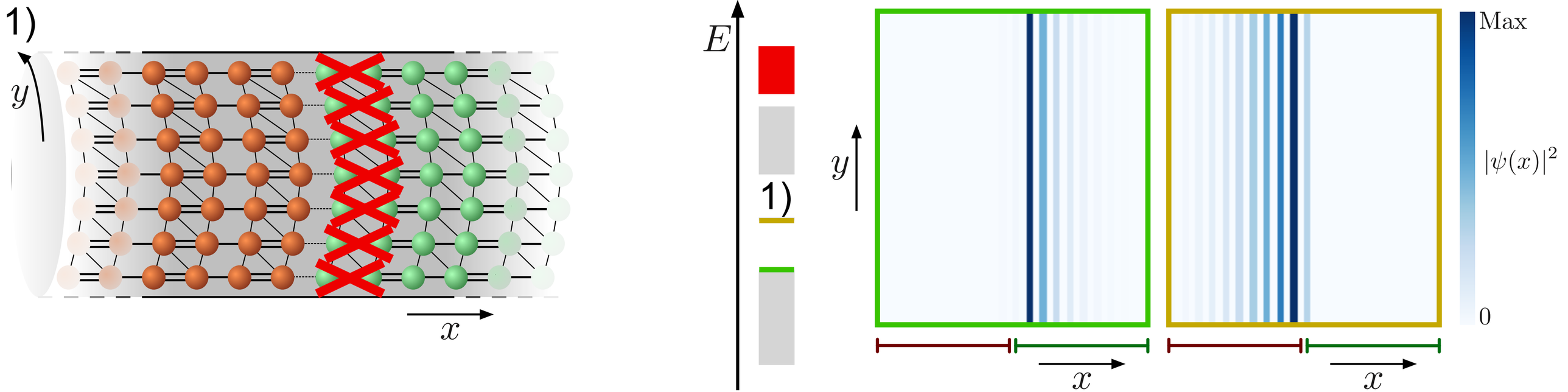
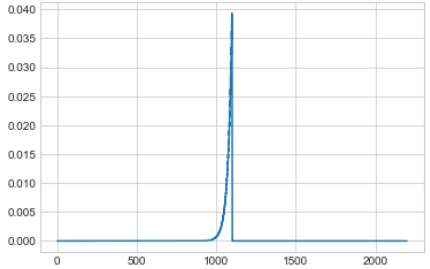
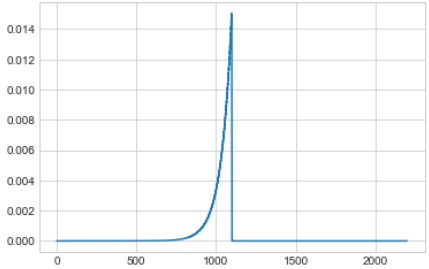

1)
y
x
E
1)
y
x
x
Max
$|\psi(x)|^2$
0

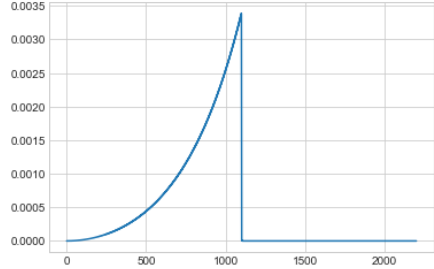
2)



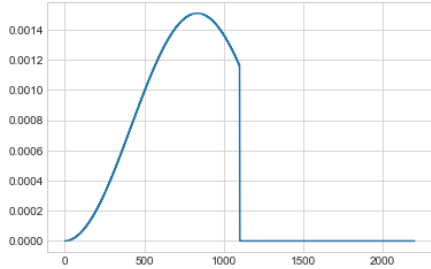
V = 40
interface state well-localised to left of the impurity potential.



V = 41
energy of interface state approaches the bulk band edge, and interface state broadens.



V = 41.5
interface state broadening reaches x=0.



V = 41.7
interface state hybridizes with bulk state, and forms a maximum that gradually moves away from the interface.