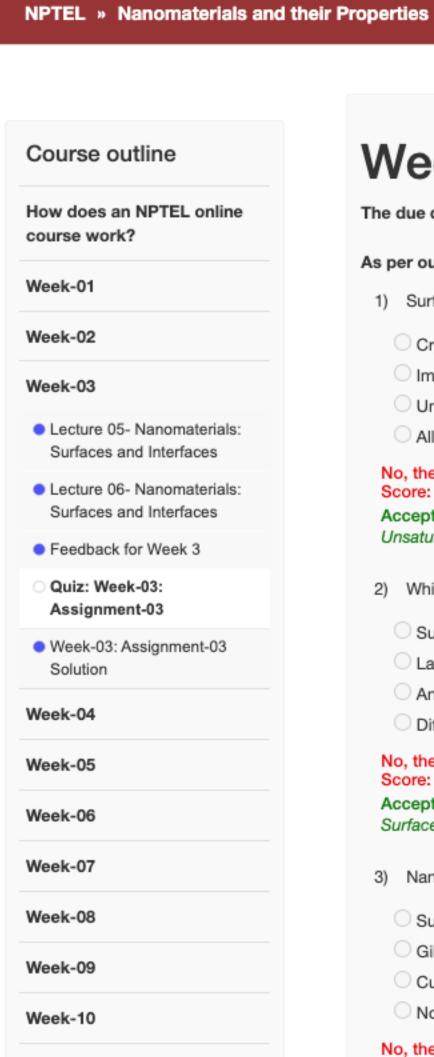
Mentor



Week-11

Week- 12

DOWNLOAD VIDEOS

Week-03: Assignment-03 The due date for submitting this assignment has passed.	
As per our records you have not submitted this assignment.	Due on 2021-08-25, 23:59 IST.
Surface energy arises due to	1 point
Crystallographic orientation	
Impurity segregation     Unsaturated or broken bonds	
All of above	
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
Unsaturated or broken bonds	
Which factor determines the shape of nanomaterials?	1 point
Surface energy	
Lattice parameter     Anisotropy constant	
O Diffusion coefficient	
No, the answer is incorrect. Score: 0	
Accepted Answers:	
Surface energy	
Nanoparticles exhibit a high tendency to sintering, even at room temperature, due to	1 point
Surface tension Gibbs free energy	
Curvature of nanoparticles	
O None of above	
No, the answer is incorrect. Score: 0	
Accepted Answers: Curvature of nanoparticles	
Number of broken bonds per surface unit depends on the	1 point
Crystallographichic orientation     Lattice parameter	
O Particle size	
O None of above	
No, the answer is incorrect. Score: 0	
Accepted Answers: Crystallographichic orientation	
<ol> <li>For FCC metals, the surface energy (γ) of different atomic planes in the order of</li> </ol>	1 point
○ γ{111}< γ{100}< γ{110}	
$\bigcirc \gamma\{111\} > \gamma\{100\} > \gamma\{110\}$ $\bigcirc \gamma\{111\} < \gamma\{100\} = \gamma\{110\}$	
$\bigcirc \gamma\{111\} > \gamma\{100\} = \gamma\{110\}$	
No, the answer is incorrect. Score: 0	
Accepted Answers: y{111}< y{100}< y{110}	
Surface-to-volume ratio of the cylinder with radius r and height H is	1 point
○ 2/r ○ 3/r	
○ 4/r	
○ 6/r	
No, the answer is incorrect. Score: 0	
Accepted Answers: 2/r	
7) The surface area to volume ratio of a cube with an edge side of 1 nm is R1 change to R2 of the cube with a side	de of 10 nm. Then R2=R1 1 point
○ 1/3 ○ 1/10	
O 5	
○ 3	
No, the answer is incorrect. Score: 0	
Accepted Answers: 1/10	
8) If a spherical particle with a radius of 10 µm disintegrates into a group of particles with a radius of 10 nm wher constant. The increase in surface area by a factor	re the total volume remains 1 point
○ 100	
O 1000	
O 100000	
O 1000000	
No, the answer is incorrect. Score: 0	
Accepted Answers: 1000	
9) What is total number of nanosized particles can be generated if the spherical particle with a radius of 10 μm d	isintegrates into 10 nm size of 1 point
nanoparticles ?	, , , , , , , , , , , , , , , , , , ,
1 billion	
1 million	
○ 1000 ○ 100	
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
1 billion	
10) Number of broken bonds per atom in an FCC crystal on the (100) plane	1 point
O 1.5	
○ 2 ○ 3	
○ 8 ○ 12	
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
2	