Session 7. Journey

	Activity	Topic	Interaction Mode
18:00-18:10	Welcome, defreeze, explaining class journey		Dialogue
18:10-18:25	1. Discuss your experiment design and propose Hypothesis based on what you learn from the paper and other knowledge you already have. 2. Leader, chosen by the team) shows results in 90 seconds.	**Synthesis of a Mesoporous Glass** using 3 Pluronics with different molecular weight each, sodium dodecyl sulfate and quaternary ammonium salt	1. Professor gives onstructions (2 min) 2. Work in Break Out Rooms with your team mates and prepare your proposal in no more than two slides: the first one for your DOE and the second for the hypothesis (one or more) (7 min) 3. Presentation by teams (90 seconds/team:6 min)
18:25-18-40	1. Discuss work on the power point about polarization of light and LC.	**Liquid Crystals (LC)**	1. Power point presentation. (**P**rofessor) 2. Q&A as needed (**P**rofessor and **S**tudents) 3. Students who are listening should make notes on the Google Drive. Session 7*1.
18:40-18:55	1. List the factors that will have an influence on the size of a Zero Order nano-particle 2. Write down, how would you measure the size of the nanoparticles.	**Synthesis of Zero Order nanoparticles, General aspects**	1. Go to the Mentimeter.com and open the session number: 12 60 64 and answer the two questions. *(For the second question you can google the question and come back with answers) (10 minutes)* *2. Discussion of the answers (5 minutes)*
18:55-19:15	1. Discuss the thermodynamics behind de particle size	**Synthesis of Zero Order nanoparticles. Thermodynamic explanation.**	1. Write down your comments and questions in the google drive. Session 7*1, in the respective column.
19:15-19:30	Recess		

*1 https://docs.google.com/spreadsheets/d/1gRhaK7XRsSkJEumKFqlM3cz0GlfZaGpU0djL8MA-RIs/edit#gid=688633143

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	Activity	Topic	Interaction
19:30-19.45	Learn new content	**Synthesis of zero order nanoparticles. Kinetics aspects.**	1. Power point presentation. (**P**rofessor) 2. Q&A as needed (**P**rofessor and **S**tudents)
19:45-20:00	Search for applications of zero order nanoparticles a) Team 1: Fe based b) Team 2: Au based c) Team 3: Ti Based d) Team 4: Ag based	**Applications of Metal Based nanoparticles.**	1. Work in "break out rooms" and document your proposal in Google Drive. Session 07[*1]. Metal based Zero Order Nanoparticles (8 minutes) 2. Leader, chosen by the team) shows results in 90 seconds.
20:00-20.15	Learn new content	**Synthesis of Au and Ag nanoparticles and other nanoparticle**	1. Watch the video: MAKING GOLD NANOPARTICLES https://www.youtube.com/watch?v=1vr4OKlGwPA (8min) 2. Make notes and write down questions in the google forms Session 7[*1] 3. Discussion Professor-Student, Student-Student (8min)
20:15-20:30	Learn new content	**Synthesis of Magnetic Particles in a Polymeric Matrix**	1. Power point presentation. (**P**rofessor) 2. Q&A as needed (**P**rofessor and **S**tudents) 3. Write down your comments and questions in the google drive. Session 7[*1], in the respective column.
20:30-20:40	Assign Homework		1. What is a quantum well and how it works 2. Read paper:
20:40-20:50	Take Aways		

Book Content

Chap. 1. Introduction: Definition and Introduction

Chap. 2. Physical Chemistry of Solid Surfaces

Chap. 3. Zero-Dimensional Nanostructures – Nanoparticles

Chap. 4. One-Dimensional Nanostructures – Nanowire, Nanorods.

Chap. 5. Two-Dimensional Nanostructures – Thin films.

Chap. 6. Special Nanomaterials

Chap. 7. Nanostructures Fabricated by Physical Techniques

Chap. 8. Characterization and Properties of Nanomaterials

Chap. 9. Applications of Nanomaterials