



# SNS COLLEGE OF TECHNOLOGY

## Coimbatore

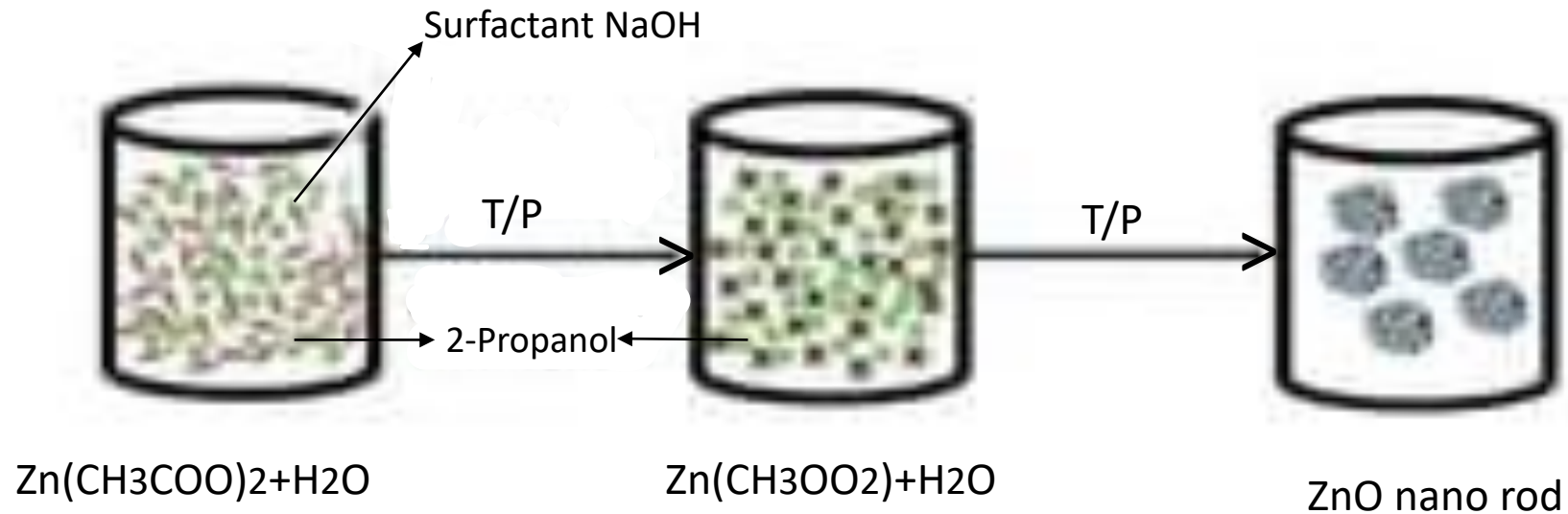


# SOLVOTHERMAL METHOD



# DEFINITION

This process involves use of solvent under moderate high pressure (1-1000) atmosphere and temperature (100 -1000) degree Celcius .it is the method used to prepare the variety of nano materials such as metals, ceramics, polymers, semi-conductors, and metal oxides.





# SYNTHESIS OF ZINC OXIDE



- It is cooled to 0 degree celcius.
- Sodium hydroxide is added to precipitate Zinc Oxide.
- Then the solution is heated to 65 degree celcius to allow growth of Zinc Oxide.
- 1-Dodecanethiol id injected as capping agent the growth.
- Rod shaped Zinc Oxide nano Pristol Zinc oxide is obtained.
- It is prepared by dissolving Zinc acetate in Propinoel and heated to 50 degree celcius.



## ADVANTAGES:

- To adjusting the parameter such as reaction temperature ,reaction time , solvent types, and surfactant type.

## DISADVANTAGES:

- The need of expensive autoclave.
- Safety issues during the reaction process .
- Impossibility of absorbing the reaction process.