Postgraduate Course: Textural Characterization of Solids by Gas Adsorption

CEM0200 – Topics In Materials Science and Engineering I

Person in charge: Dr. Karim Sapag;
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1. Introduction:
-Adsorption: Fisi and chemisorption, definition, characteristics;
-Solid Porous; characteristics, classification, description.

2. Experimental Techniques:
-Manometric and Gravimetric method to measure adsorption: description and equipment management;
-Types of Isotherms obtained, classification.

3. Characterization of Solids:
-Equipment BET: description and application;
-Data selection criteria to standardize the Sbet;
- Calculation models in micropore solids;
-Methodous solid method BJH, VBS.

4. Basic bibliography:
- “Adsoprtion by Powders and Porous Solids: Principles, Methodology and applications”, F. Rouquerol, J. Rouquerol, K.S.W. Sing,P.Llewwellyn and G. Maurin. Academic Press 2014.
- “Characterization of porous Solids and Powders: Surface Area, Pore Size and Density”, S.Lowel, J.Shields, M. Thomas and M. Thommes. Springer, 2004.
- “Analytical Methods in Fine Particle Technology”, P.A.Webb, C.Orr, R.W.Camp, J.P. Olivier, Y.S.Yunes, Micromeritics Edition, 1997.
- “Adsorption, Surfaces Area and Porosity”, 2ª Ed., S. J. Gregg and K.S.W. Sing, Academic Press (1982).
- Orther published articles on the subject.

5. Período de matrícula no SIGAA:
- 13/07/2018 a 20/07/2018.

6. Horários dos encontros:
- 25/07 das 08h às 12h (Auditório do NUPPRAR);
- 25/07 das 14h às 18h (Auditório do NUPPRAR); e
- 26/07 das 08h às 12h (Auditório do NUPPRAR).