



SMS instruments are used over a wide range of disciplines. To keep abreast with cutting edge research using dynamic vapor sorption and inverse gas chromatography, SMS regularly reviews the literature. The below papers present recent peer-reviewed articles utilizing gravimetric vapor sorption or inverse gas chromatography.

DVS Articles:

FG Vogt, RCB Copley, RL Mueller, GP Spoons, TN Cacchio, RA Carlton, LM Katrincic, JM Kennady, S Parsons, and OV Chetina, "Isomorphism, disorder, and hydration in the crystal structures of racemic and single-enantiomer carvedilol phosphate" *Crystal Growth & Design*, 10(6): 2713-2733 (2010).

L Martinez-dlCruz and H Pfeiffer, "Towards understanding the effect of water sorption on lithium zirconate during its carbonation process at low temperatures" *Journal of Physical Chemistry C*, 114(20): 9453-9458 (2010).

C Pitchayajittipong, R Price, J Shur, JS Kaerger, and S Edge, "Characterisation and functionality of inhalation anhydrous lactose" *International Journal of Pharmaceutics*, 390(2): 134-141 (2010).

HT Sahin, "Experimental determination of the anisotropic swelling and water sorption properties of chestnut wood" *Wood Research*, 55(1): 33-40 (2010).

I Batonneau-Gener, A Yonli, A Trouve, M Guidotti, and M Sgobba, "Tailoring the hydrophobic character of mesoporous silica by silylation for VOC removal" *Separation science and technology*, 45(6): 768-775 (2010).

J Zaihan, CAS Hill, S Curling, WS Hashim, and H Hamdan, "The kinetics of water vapour sorption: analysis using parallel exponential kinetics model on six Malaysian hardwoods" *Journal of Tropical Forest Science*, 22(2): 107-117 (2010).

MIU Islam, R Sherrell, and TAG Langrish, "An investigation of the relationship between glass transition temperatures and the crystallinity of spray-dried powders" *Drying Technology*, 28(3): 361-368 (2010).

CF Du and HM Yang, "Synthesis and characterization of zeolite 4A-type desiccant from kaolin" *American Mineralogist*, 95(5-6): 741-746 (2010).

FM Sayler, MG Bakker, JH Smatt, and M Linden "Correlation between electrical conductivity, relative humidity, and pore connectivity in mesoporous silica monoliths" *Journal of Physical Chemistry C*, 114(19): 8710-8716 (2010).

V Garsuch and J Breitzkreutz, "Comparative investigations on different polymers for the preparation of fast-dissolving oral films" *Journal of Pharmacy and Pharmacology*, 62(4): 539-545 (2010).

PN Balani, WK Ng, RBH Tan, and SY Chan, "Influence of excipients in comilling on mitigating milling-induced amorphization or structural disorder of crystalline pharmaceutical actives" *Journal of Pharmaceutical Sciences*, 99(5): 2462-2474 (2010).

G Akiyama, R Matsuda, and S Kitagawa, "Highly porous and stable coordination polymers as water sorption materials" *Chemistry Letters*, 39(4): 360-361 (2010).

LG Thygesen, ET Engelund, and P Hoffmeyer, "**Water sorption in wood and modified wood at high values of relative humidity**" *Holzforschung*, 64(3): 315-323 (2010).

CL Buquet, K Fatyeyeva, F Poncin-Epaillard, P Schaetzel, E Dargent, D Langevin, QT Nguyen, and S Marais, "**New hybrid membranes for fuel cells: plasma treated laponite based sulfonated polysulfone**" *Journal of Membrane Science*, 351(1-2): 1254-1-10

D Charriere and P Behra, "**Water sorption on coals**" *Journal of Colloid and Interface Science*, 344(2): 460-467 (2010).

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IGC Articles:

A Marciniak, "**The solubility parameters of ionic liquids**" *International Journal of Molecular Sciences*, 11(5): 1973-1990 (2010).

YH Wang, CM Gong, JS Sun, H Gao, SA Zheng, and SM Xu, "**Separation of ethanol/water azeotrope using compound starch-based adsorbents**" *Bioresource Technology*, 15: 6170-6176 (2010).

B Zamora, M Autie, JL Contreras, M Centeno, and E Reguera, "**Separation of oxygen and nitrogen by porous cyanometallates**" *Separation Science and Technology*, 45(5): 692-699 (2010).

H Grajek, J Paciura-Zadrozna, and Z Witkiewicz, "**Chromatographic characterization of ordered mesoporous silicas Part I and Part II**" *Journal of Chromatography A*, 1217(18): 3105-3127 (2010).

A Speltini, D Merli, E Quartarone, and A Profumo, "**Separation of alkanes and aromatic compounds by packed column chromatography using functionalized multi-walled carbon nanotubes as stationary phases**" *Journal of Chromatography A*, 1217(17): 2918-2924 (2010).

S Ordonez, BP Vivas, FV Diez, "**Minimization of the deactivation of palladium catalysts in the hydrodechlorination of trichloroethylene in wastewaters**" *Applied Catalysis B*, 95(3-4): 288-296 (2010).

AL Revelli, F Mutelet, JN Jaubert, "**Extraction of benzene or thiophene from n-heptane using ionic liquids**" *Journal of Physical Chemistry B*, 114(13): 4600-4608 (2010).

O Planinsek, J Zadnik, M Kunaver, S Srcic, and A Godec, "**Structural evolution on indomethacin particles upon milling: time-resolved quantification and localization of disordered structure studied by IGC and DSC**" *Journal of Pharmaceutical Sciences*, 99(4): 1968-1981 (2010).

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R Ho, SJ Hinder, JF Watts, SE Dilworth, DR Williams, and JYY Heng, "**Determination of surface heterogeneity of D-mannitol by sessile drop contact angle and finite concentration IGC**" *International Journal of Pharmaceutics*, 387(1-2): 79-86 (2010).

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A Amari, M Chlendi, A Gannouni, and A Bellagi, "**Optimized activation of bentonite for toluene adsorption**" *Applied Clay Science*, 47(3-4): 457-461 (2010).

J Zhang, QH Zhang, XL Li, SM Liu, YB Ma, F Shi, and YQ Deng, "**Nanocomposites of ionic liquids confined in mesoporous silica gels: preparation, characterization and performance**" *Physical Chemistry Chemical Physics*, 12(8): 1971-1981 (2010).

Recent SMS Application Notes, Case Studies, or Presentations:

PhandTA-11: Characterizing Pharmaceutical Materials using the Combination of DVS and in-situ Raman Spectroscopy.

Upcoming SMS Conferences:

Controlled Release Society: Portland, Oregon USA, 10-14 July 2010.

IFT Food Expo: Chicago, IL USA, 18-20 July 2010.

Upcoming SMS Training Courses:

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