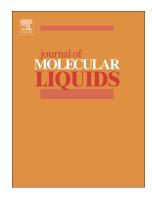
Accepted Manuscript

Poly(vinyl alcohol) as a structuring agent for peroxotungstic acid



Diego Soares de Moura, Julia Cristina Oliveira Pazinato, Marcelo Barbalho Pereira, Omar Mertins, Emerson Rodrigo Silva, Irene Teresinha Santos Garcia

PII:	S0167-7322(18)31377-1
DOI:	doi:10.1016/j.molliq.2018.08.015
Reference:	MOLLIQ 9460
To appear in:	Journal of Molecular Liquids
Received date:	18 March 2018
Revised date:	19 July 2018
Accepted date:	3 August 2018

Please cite this article as: Diego Soares de Moura, Julia Cristina Oliveira Pazinato, Marcelo Barbalho Pereira, Omar Mertins, Emerson Rodrigo Silva, Irene Teresinha Santos Garcia, Poly(vinyl alcohol) as a structuring agent for peroxotungstic acid. Molliq (2018), doi:10.1016/j.molliq.2018.08.015

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Poly(vinyl alcohol) as a structuring agent for peroxotungstic acid

Diego Soares de Moura ^a, Julia Cristina Oliveira Pazinato ^a, Marcelo Barbalho Pereira ^b, Omar Mertins ^c, Emerson Rodrigo Silva ^c, Irene Teresinha Santos Garcia ^{d,*}

^a Instituto de Química, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS

^bInstituto de Física, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS

^cDepartamento de Biofísica, Universidade Federal de São Paulo, São Paulo, SP ^dDepartamento de Físico-Química, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, irene.garcia@ufrgs.br

ABSTRACT

Poly(vinyl alcohol) (PVAL) is an interesting architecture-directing material and is useful for synthesizing transition metal oxides through the sol-gel method. In this work, the interaction between PVAL and peroxotungstic acid (PTA) in aqueous media was investigated by conductivity, zeta potential, small- angle x-ray scattering, isothermal titration calorimetry and fluorescence measurements. The strong exothermic effect and the change in organization in aqueous media, from extended chains to compact chains forming fractal structures, confirm the interaction between PTA and PVAL. Powders were obtained from these systems by removal of water and subsequent calcination. An increase in the crystal size and changes in morphology were observed with the increasing of PVAL

Download English Version:

https://daneshyari.com/en/article/7841678

Download Persian Version:

https://daneshyari.com/article/7841678

Daneshyari.com