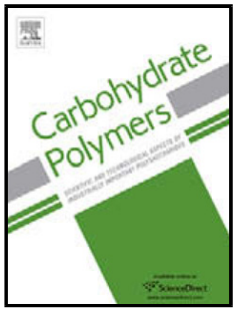

Title: Expanded Corn Starch as a versatile material in atom transfer radical polymerization (ATRP) of styrene and methyl methacrylate

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- Native corn starch has been converted into Expanded corn starch (ECS) having V-type crystallinity, high surface and high pore volume.
- Hydroxyl groups on ECS surface are converted to Macro-initiator (ECS-Br) in SI-ATRP.
- ECS as solid support for the synthesis of catalyst complex to form ECS-$CuBr_2$/ PMDETA used in AGET-ATRP.
- MMA and styrene polymerized by both SI and AGET- ATRP.
- ECS, ECS-Br, ECS-$CuBr_2$/ PMDETA, PS and PMMA characterized by TEM, SEM, FT-IR, NMR and XRD.