

## Supporting information

### Facile Synthesis of Highly Branched Poly(acrylonitrile-*co*-vinyl acetate) with Low Viscosity and High Thermal Stability via Radical Aqueous Solution Polymerization

Wenyan Huang<sup>a</sup>, Chang Liu<sup>a</sup>, Hongjun Yang<sup>a</sup>, Xiaoqiang Xue<sup>a</sup>, Bibiao Jiang<sup>a\*</sup>, Dongliang Zhang<sup>a</sup>,  
Lizhi Kong<sup>a</sup>, Yan Zhang<sup>a</sup>, and Sridhar Komarneni<sup>b\*</sup>

<sup>a</sup> School of Materials Science and Engineering, Changzhou University, Changzhou 213164, China

<sup>b</sup> Materials Research Laboratory, Materials Research Institute, The Pennsylvania State University,  
University Park, Pennsylvania 16802

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\*Corresponding Author, Email: [jiangbibiao@cczu.edu.cn](mailto:jiangbibiao@cczu.edu.cn), Phone: (86)519-8633-0006, Fax: (86)519-8633-0047

\*Corresponding Author, Email: [Komarneni@psu.edu](mailto:Komarneni@psu.edu), Phone: 814-865-1542, Fax: 814-865-2326

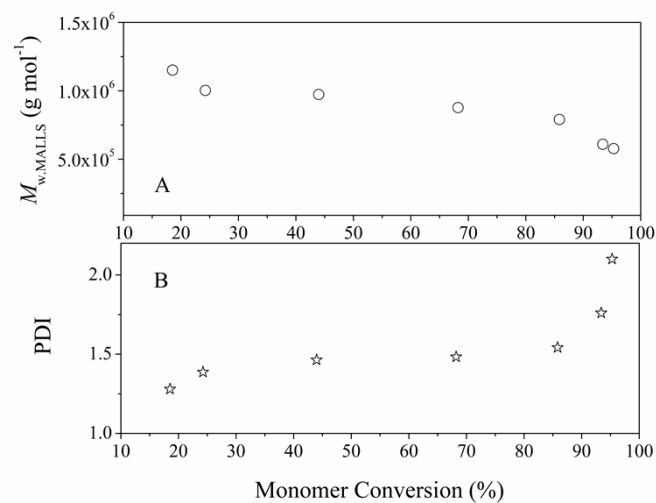


Fig. S1 Relationships of the weight average molecular weight and PDI with conversion during the copolymerization of AN and VAc in NaSCN aqueous solution at 60 °C in the following ratio:

$$[\text{AN}]/[\text{VAc}]/[\text{AIBN}]=88:11:1$$

Table S1. The reactivity ratio of comonomers

$M_1$	$M_2$	$r_1$	$r_2$
AN	MMA	0.15	1.224
VAc	MMA	0.015	20
AN	VAc	4.2	0.05

$M_1$ ,  $M_2$  denotes monomer 1 and monomer 2, respectively.  $r_1$ ,  $r_2$  denotes the reactivity ratio of monomer 1 and monomer 2, respectively.