Electronic Supplementary Material (ESI) for Materials Advances.

Supporting information

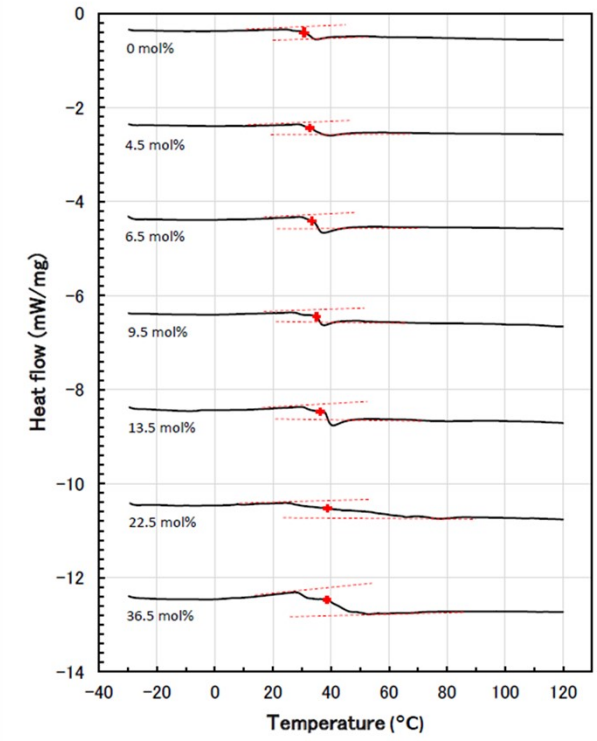

Figure S1. DSC thermograms for glass transition of polyamide 4 and *N*-methylol polyamide 4 with different degree of methylolation.

Table S1 Grass transition point of several vinyl polymers [a].

Poly(ethylene)	-125°C, -118°C, -110°C, -83°C, -78°C, -25°C, 2°C	av. -76.7°C
Poly(propylene) atactic	-35°C, -30°C, -20°C, -10°C, -7°C, -6°C	av. -18.0°C
Poly(vinyl acetate)	29°C, 30°C, 31°C, 32°C, 38°C, 40°C, 42°C	av. 34.6°C
Poly(vinyl alcohol)	35°C, 77°C, 85°C	av. 65.7°C
Poly(vinyl chloride)	69°C, 74°C, 80°C, 81°C, 84°C, 86°C, 88°C, 90°C, 93°C, 98°C	av. 84.3°C
Poly(acrylic acid)	75°C, 106°C	av. 90.5°C

a Reported data from Polymer Handbook 4th ed., 1999, Section VI, 193.

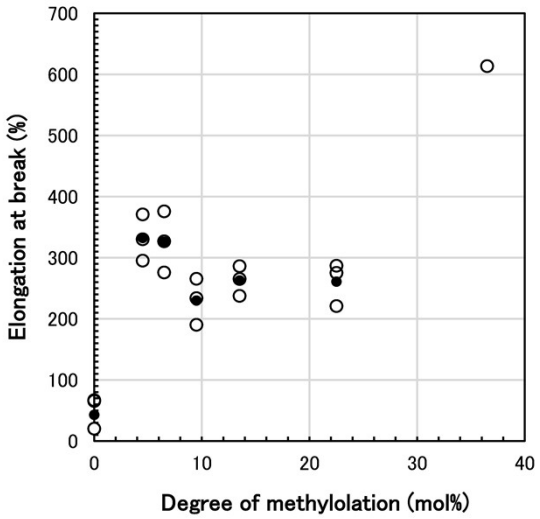

Figure S2. Relationship between elongation at break and degree of methylolation for *N*-methylol polyamide 4 (black filled circle: average of each lot, white open circle: average of each specimen for same lot).

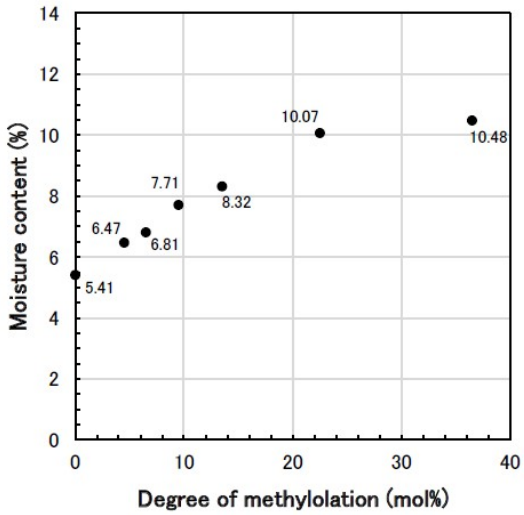

Figure S3. Relationship between moisture content and degree of methylolation at hygroscopic equilibrium.