Electronic Supplementary Material (ESI) for Polymer Chemistry. This journal is © The Royal Society of Chemistry 2021

## **Supporting Information**

to

## Photo-induced Copper-Mediated Polymerization of Methyl Acrylate in Continuous Flow Reactors

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**Figure S1:** Evolution of monomer conversion with reaction time of UV-induced copper-mediated radical polymerization of MA in the milli-flow reactor with target  $M_n = 2000 (\clubsuit)$ ,  $4000 (\clubsuit)$  and  $9800 (\blacktriangle)$  g · mol<sup>-1</sup>.



**Figure S2:** Decrease of the dispersity with monomer conversion of MA polymerizations in a milli-flow reactor via UV-induced copper-mediated radical polymerization, with target  $M_n = 2000 (\clubsuit)$ ,  $4000 (\clubsuit)$  and  $9800 (\blacktriangle)$  g  $\cdot \text{mol}^{-1}$ .



**Figure S3:** Molecular weight distributions with increasing residence time in the milli-flow reactor during a UVinduced copper-mediated radical polymerization of MA (target  $M_n = 2000 \text{ g} \cdot \text{mol}^{-1}$ )



**Figure S4:** Molecular weight distributions with increasing residence time in the milli-flow reactor during a UV-induced copper-mediated radical polymerization of MA (target  $M_n = 4000 \text{ g} \cdot \text{mol}^{-1}$ )



Figure S5: Molecular weight distributions with increasing residence time in the milli-flow reactor during a UVinduced copper-mediated radical polymerization of MA (target  $M_n = 9800 \text{ g} \cdot \text{mol}^{-1}$ ).



**Figure S6:** Full ESI-MS spectra of pMA (target  $M_n = 2000 \text{ g} \cdot \text{mol}^{-1}$ ) obtained by UV-induced copper-mediated radical polymerization at residence times of 10, 15 and 20 minutes in the milli-flow reactor