Electronic supplementary information

Table ESI 1: the size of spherical polymer particles predicted to have a settling/floating velocity of 4.6 x 10^{-4} $m \cdot s^{-1}$ (equivalent to an overflow velocity of 40 $m^3/m^2 \cdot day^{-1}$). Particles above this size are predicted to be removed by density-driven separation during primary sedimentation. See the manuscript for more details.

Polymer	**Density of solid ($kg.m^{-3}$)**	**Density of water ($kg.m^{-3}$)**	**Dynamic viscosity of water ($kg \cdot m^{-1} \cdot s^{-1}$)**	**Critical particle diameter (µm)**
Expanded polystyrene	25	998.2	$1.002x10^{-3}$	30
Low-density polyethylene	910	998.2	$1.002x10^{-3}$	98
High-density polyethylene	960	998.2	$1.002x10^{-3}$	149
Polypropylene	875	998.2	$1.002x10^{-3}$	83
Polystyrene	1070	998.2	$1.002x10^{-3}$	109
Polyethylene terephthalate	1205	998.2	$1.002x10^{-3}$	64
Polyamide	1090	998.2	$1.002x10^{-3}$	96
Polyvinylchloride	1370	998.2	$1.002x10^{-3}$	48
Acrylic	1145	998.2	$1.002x10^{-3}$	76
Polycarbonate	1210	998.2	$1.002x10^{-3}$	63
Polyurethane	1200	998.2	$1.002x10^{-3}$	65
Alkyd	1670	998.2	$1.002x10^{-3}$	36
Polyester	1770	998.2	$1.002x10^{-3}$	33
Polyoximethylene	1510	998.2	$1.002x10^{-3}$	41
polyvinyl alcohol	1250	998.2	$1.002x10^{-3}$	58
Polytetrafluoroethylene	2200	998.2	$1.002x10^{-3}$	27