

Process for producing fumed silica powder with a decreased silanol group density, comprising subjecting a fumed surface untreated silica powder with a silanol density d_{SiOH} of at least 1.2 SiOH/nm^2 and a particle size $d_{90}^{\text{°F}}$ not more than $10 \text{ }\mu\text{m}$, to thermal treatment at a temperature of $350 \text{ }^{\circ}\text{C}$ to $1250 \text{ }^{\circ}\text{C}$ for 5 min to 5h, wherein the temperature and the duration of the thermal treatment are chosen so that d_{SiOH} of the silica is decreased by 10 % - 70 % relative to d_{SiOH} of the employed thermally untreated silica, wherein the thermal treatment is carried out while the fumed silica powder is in motion, followed by optional surface treatment. Surface unmodified and modified fumed silica powders obtained by this process and the use thereof.