Supporting Information

SiC$_x$N$_y$:Fe films as a tunable ferromagnetic material with tailored conductivity

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Fig. S1. Surface morphology of SiC\(_x\)N\(_y\):Fe films deposited from gaseous mixture of TDEAS, ferrocene and hydrogen at (a) – 800°C, (b) – 900°C, (c) – 1000°C

Fig. S2. Surface morphology of SiC\(_x\)N\(_y\):Fe films deposited from gaseous mixture of TDEAS, ferrocene and ammonia at (a) – 800°C, (b) – 900°C, (c) – 1000°C

Fig. S3. Raman spectra of SiC\(_x\)N\(_y\):Fe films deposited from gaseous mixture of (a) – TDEAS, ferrocene and hydrogen and (b) – TDEAS, ferrocene and ammonia

Fig. S4. Magnetization curves of the SiC\(_x\)N\(_y\):Fe films deposited at 900-1000 °C from (a, b) – H\(_2\)-containing gas mixture and (c, d) – ammonia-containing gas mixture

Fig. S5. Raman spectra of SiC\(_x\)N\(_y\):Fe films deposited from gaseous mixture of (a) – TDEAS, ferrocene and hydrogen and (b) – TDEAS, ferrocene and ammonia
Fig. S5. XRD pattern of the SiCNₓ:Fe film deposited at 1000 °C from ammonia-containing gas mixture.