

Upgrading of Silicon Slag into Radiative Cooling Materials by Controlled Oxidation with Oxygen Carriers

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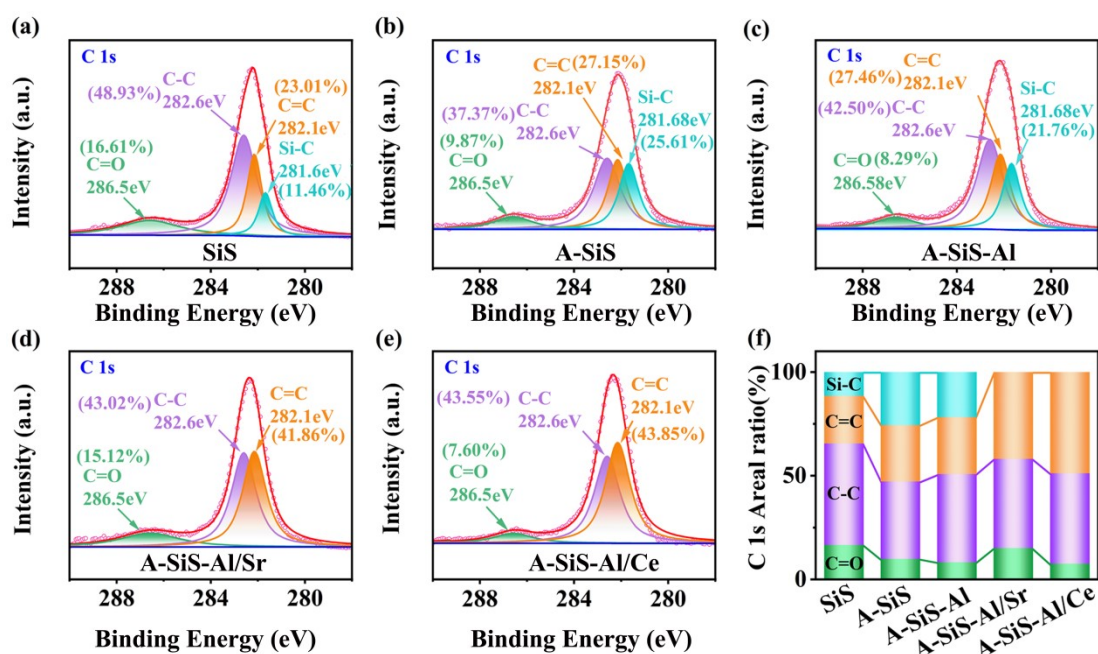


Fig. S1. C 1s XPS data of the TG tested SiS, A-SiS, A-SiS-Al, A-SiS-Al/Ce, and A-SiS-Al/Sr samples. (a) SiS sample. (b) A-SiS sample. (c) A-SiS-Al sample. (d) A-SiS-Al/Ce sample. (e) A-SiS-Al/Sr sample. (f) Areal ratio of various C 1s signals.

Oxidation of SiC with SrO_x oxygen carrier

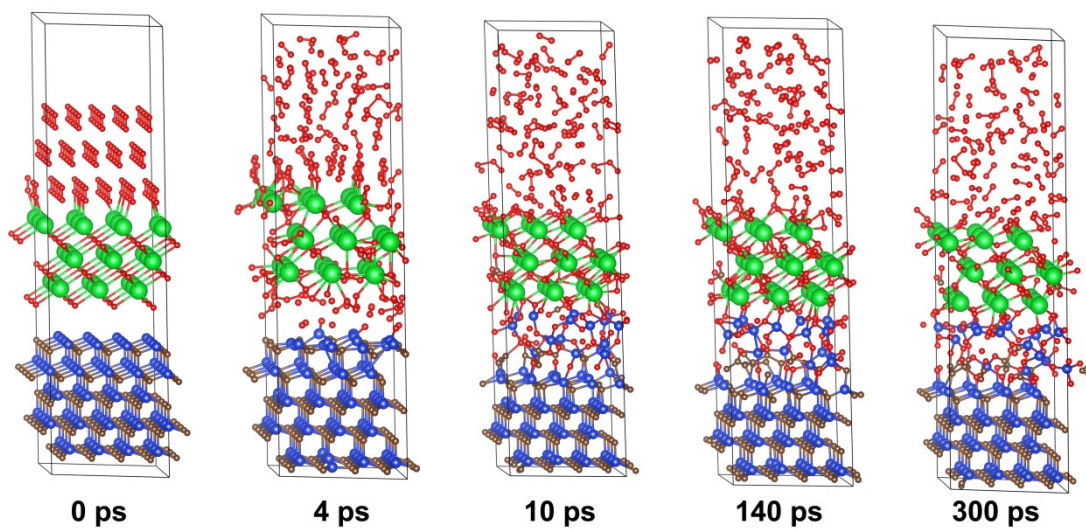


Fig. S2. Simulation of oxidation behaviors between the SiC and O₂ molecules with an oxygen carrier of SrO_x interlayer.

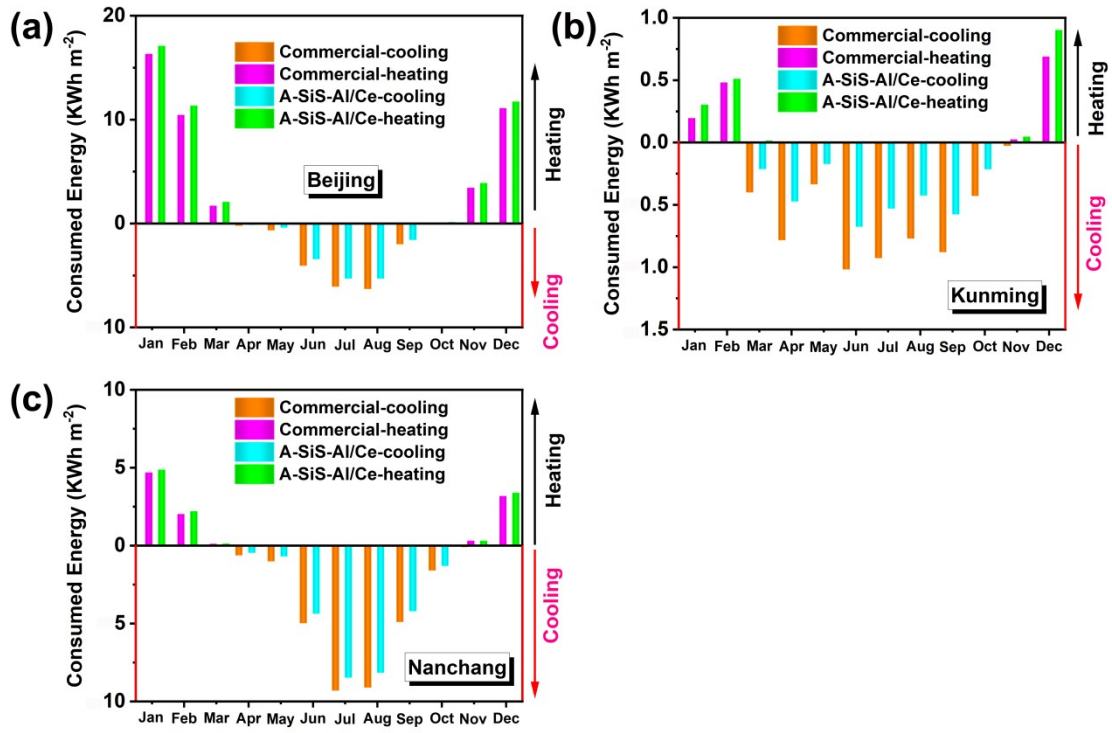


Fig. S3. (a) (b) (c) Simulated monthly consumed building energy in Beijing, Kunming and Nancheng, respectively.

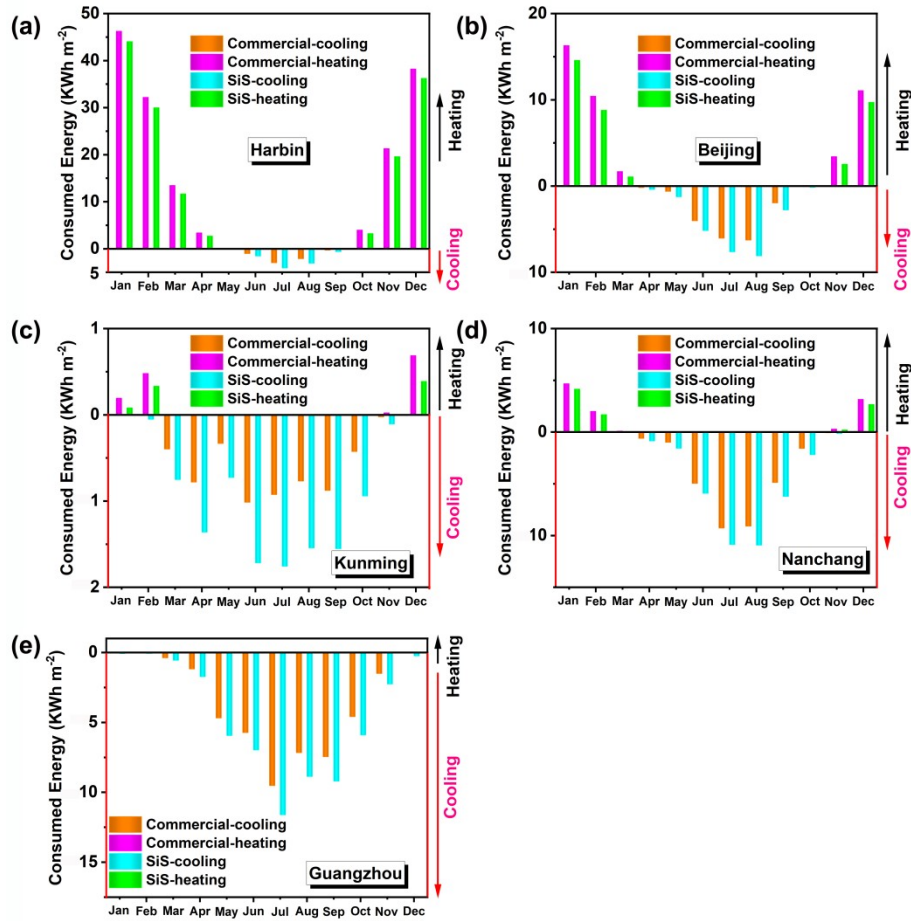


Fig. S4. (a) (b) (c) (d) (e) Simulated monthly consumed building energy in Harbin, Beijing, Kunming, Nancheng, and Nannchang, respectively.

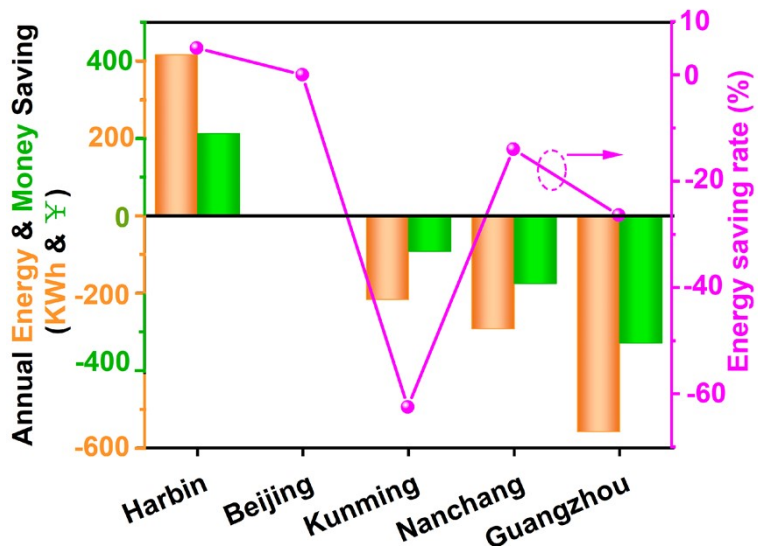


Fig. S5. Annual energy & money saving values in climatic regions of Harbin, Beijing, Kunming, Nancheng, and Guangzhou with the SiS membrane.

Table S1. The electricity prices in Harbin, Beijing, Nancheng, Kunming, and Guangzhou.

City	Harbin	Beijing	Nancheng	Kunming	Guangzhou
Electricity price (RMB/kWh)	0.51	0.49	0.60	0.42	0.59