[43] R. Vosk and E. Altman, Many-body localization in one dimension as a dynamical renormalization group fixed point, Phys. Rev. Lett. **110**, 067204 (2013).

[44] D. Pekker, G. Refael, E. Altman, E. Demler, and V. Oganesyan, Hilbert-glass transition: New universality of temperature-tuned many-body dynamical quantum criticality, Phys. Rev. X **4**, 011052 (2014).

[45] R. Vasseur, A. C. Potter, and S. A. Parameswaran, Quantum criticality of hot random spin chains, Phys. Rev. Lett. **114**, 217201 (2015).

[46] R. Vasseur, A. J. Friedman, S. A. Parameswaran, and A. C. Potter, Particle-hole symmetry, many-body localization, and topological edge modes, Phys. Rev. B **93**, 134207 (2016).

[47] P. Scholl, H. J. Williams, G. Bornet, F. Wallner, D. Barredo, L. Henriet, A. Signoles, C. Hainaut, T. Franz, S. Geier, A. Tebben, A. Salzinger, G. Zürn, T. Lahaye, M. Weidemüller, and A. Browaeys, Microwave engineering of programmable XXZ Hamiltonians in arrays of Rydberg atoms, PRX Quantum **3**, 020303 (2022).

[48] A. Braemer, T. Franz, M. Weidemüller, and M. Gärttner, Pair localization in dipolar systems with tunable positional disorder, Phys. Rev. B **106**, 134212 (2022).

[49] T. Langen, T. Gasenzer, and J. Schmiedmayer, Prethermalization and universal dynamics in near-integrable quantum systems, J. Stat. Mech.: Theory Exp. (2016) 064009.

[50] L. Christakis, J. S. Rosenberg, R. Raj, S. Chi, A. Morningstar, D. A. Huse, Z. Z. Yan, and W. S. Bakr, Probing site-resolved correlations in a spin system of ultracold molecules, Nature (London) **614**, 64 (2023).

[51] L. Rademaker and D. A. Abanin, Slow nonthermalizing dynamics in a quantum spin glass, Phys. Rev. Lett. **125**, 260405 (2020).

[52] J. Bezanson, A. Edelman, S. Karpinski, and V. B. Shah, Julia: A fresh approach to numerical computing, SIAM Rev. **59**, 65 (2017).

[53] T. Franz, S. Geier, A. Braemer, C. Hainaut, A. Signoles, N. Thaicharoen, A. Tebben, A. Salzinger, M. Gärttner, G. Zürn, and M. Weidemüller, Emergent pair localization in a many-body quantum spin system, arXiv:2207.14216.