The formation and development of nebkhas based on chronology and sedimentology in the Ordos Plateau, northern China

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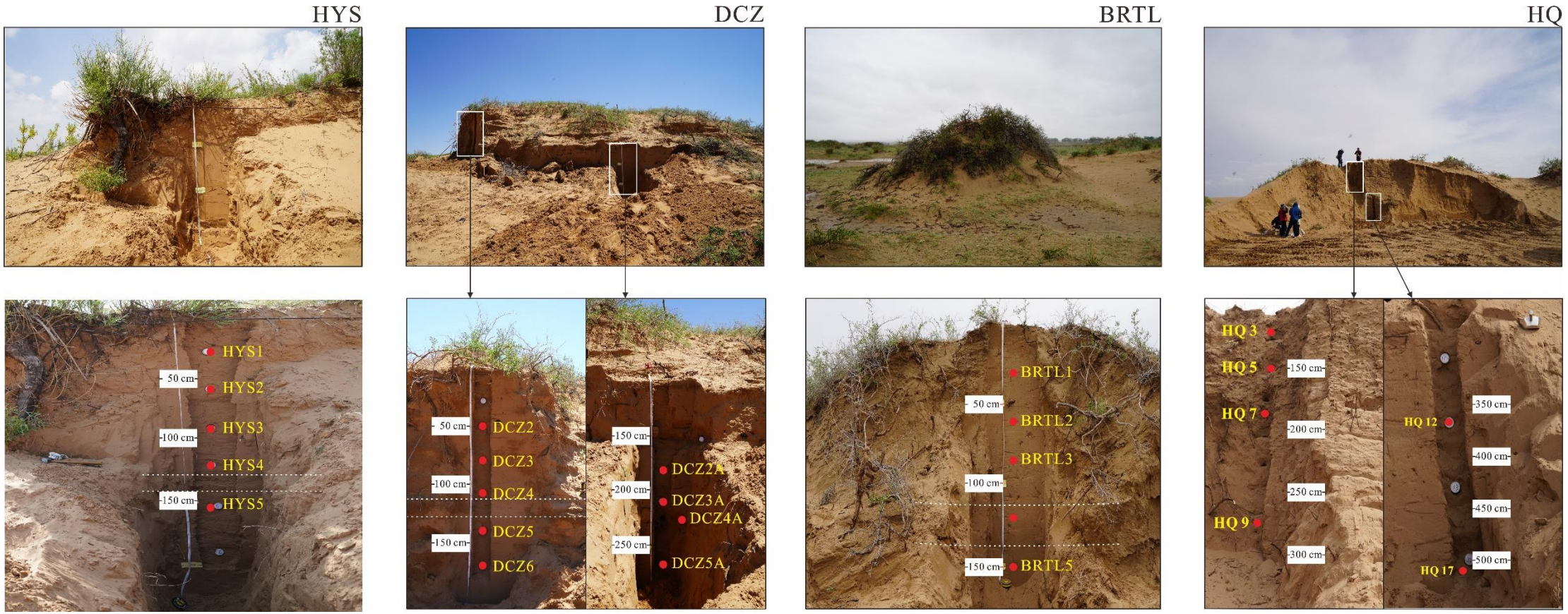

Fig. S1. Photographs and locations of luminescence dating samples collected from the nebkha profiles in this study.

Table 1 Equivalent dose measurement protocols used in this study. The pIRIR50, 170 protocol was from Li et al. (2015).

Step	K-feldspar[b]	
	Measurement type	Observed
1	Regenerative dose, Di	
2	Preheat at 200 ℃ for 60 s	
3	IRSL, 100 s at 50 ℃	L_{X1}
4	pIRIR, 100 s at 170 ℃	L_{X2}
5	Test dose, Dt	
6	Preheat at 200 ℃ for 60 s	
7	IRSL, 100 s at 50 ℃	T_{X1}
8	pIRIR, 100 s at 170 ℃	T_{X2}
9	Return to step 1	

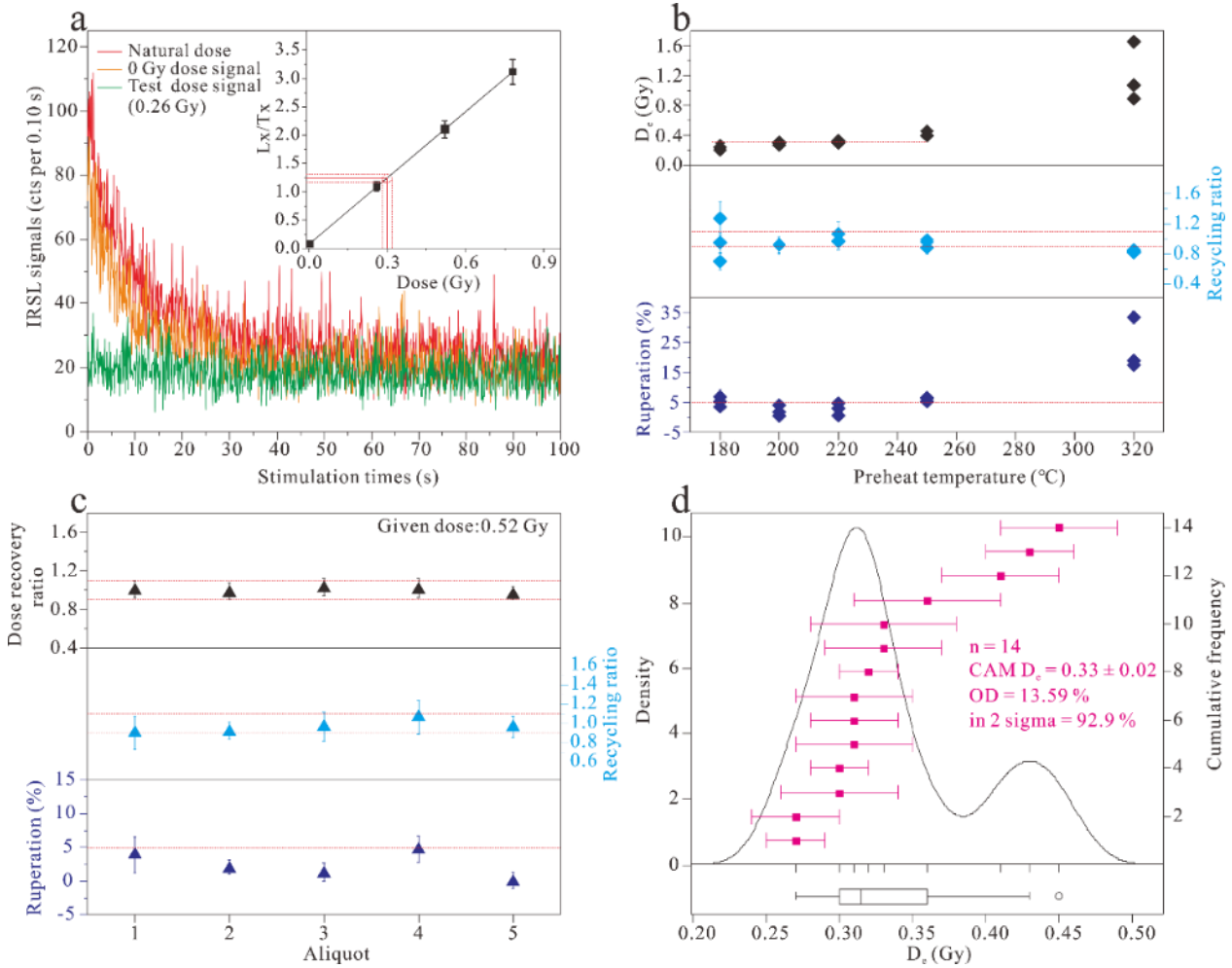

Fig. S2. (a) The characteristics of $pIRIR_{170}$ signal for sample HYS3; (b-c) the results of preheat plateau and dose recovery tests; (d) equivalent dose (D_e) distribution.

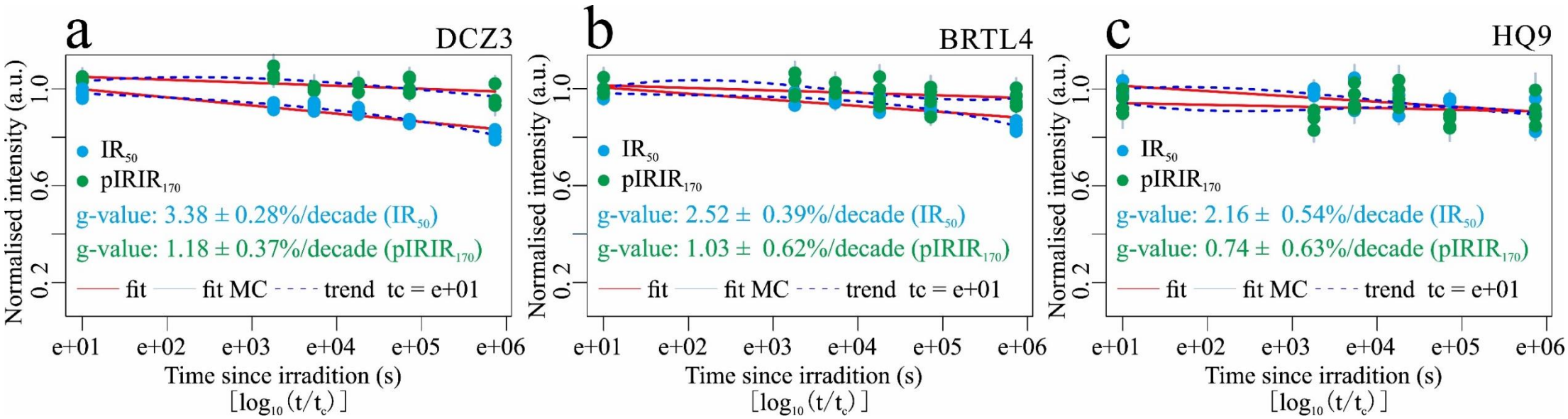

Fig. S3. Anomalous fading rates (g-values) of IR50 and pIRIR170 signals (4 discs for each sample) for representative samples DCZ3 (a), BRTL4 (b) and HQ9 (c).

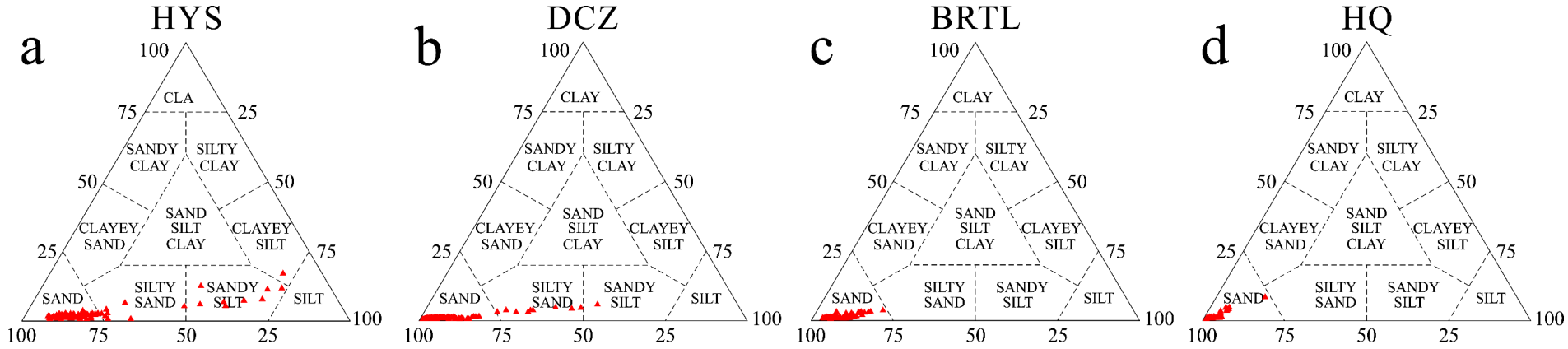

Fig. S4. Shephard's diagram of the nebkha sediments in this study.

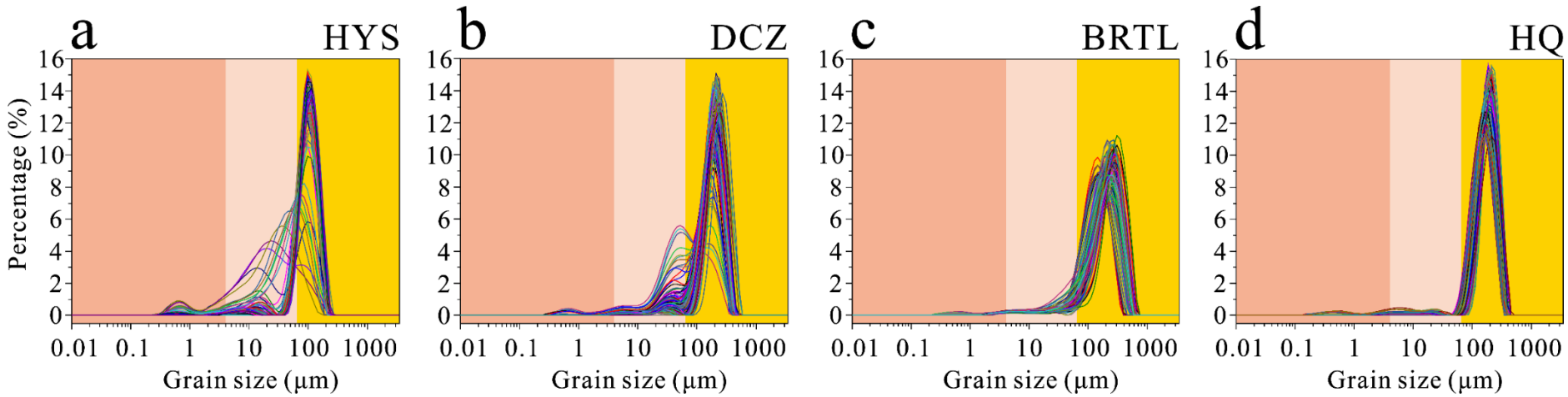

Fig. S5. Grain size frequency distribution curves of sediments from nebkha profiles.