TABLE I
COMPARED WITH SOTA METHODS ON CUB200.

Method	Acc. in each session(%)↑											AA↑
	0	1	2	3	4	5	6	7	8	9	10	
CEC	76.11	71.68	67.35	62.02	60.89	57.28	56.30	54.21	52.11	51.48	49.91	59.94
C-FSCIL	69.87	64.62	60.55	55.93	52.41	49.08	46.79	44.45	42.39	40.72	38.92	51.43
FACT	77.19	73.30	70.37	65.31	64.77	61.61	60.90	59.45	57.86	57.42	56.31	64.04
NG-FSCIL	74.30	64.68	60.85	58.05	53.80	51.57	48.74	47.00	44.78	43.57	41.40	53.52
WaRP	79.12	75.15	71.28	67.28	64.80	61.77	60.08	59.17	57.17	56.59	55.25	64.33
PFR	77.78	73.72	71.40	68.75	67.96	63.05	62.87	60.61	59.59	58.73	57.54	65.64
Ours	**82.52**	**78.28**	**74.69**	**69.33**	**68.35**	**64.92**	**64.65**	**63.44**	**61.65**	**61.06**	**60.26**	**68.10**

TABLE II
COMPARED WITH SOTA METHODS ON STANFORD CARS.

Method	Acc. in each session(%)↑										AA↑
	0	1	2	3	4	5	6	7	8	9	
CEC	65.23	59.22	54.43	50.75	47.57	45.38	42.41	41.16	39.17	37.09	48.24
C-FSCIL	42.80	37.50	32.83	29.63	26.76	24.64	22.82	21.57	20.18	18.90	27.76
FACT	76.76	68.57	63.29	57.93	54.59	52.69	49.77	48.02	46.12	43.98	56.17
NG-FSCIL	46.16	44.97	43.20	41.78	39.43	39.13	37.84	36.98	35.88	34.72	40.01
WaRP	77.19	69.01	63.58	58.19	54.73	52.45	49.41	47.98	45.95	43.72	56.22
PFR	**82.02**	72.22	66.19	60.73	56.19	53.04	50.00	49.22	47.02	44.56	58.12
Ours	81.20	**73.60**	**68.29**	**63.98**	**60.14**	**58.56**	**55.47**	**54.20**	**52.00**	**49.59**	**61.70**

TABLE III
COMPARED WITH SOTA METHODS ON STANFORD DOGS.

Method	Acc. in each session(%)↑									AA↑
	0	1	2	3	4	5	6	7	8	
CEC	55.01	46.05	43.83	41.57	39.28	37.26	35.53	33.87	32.65	40.56
C-FSCIL	32.22	28.34	25.68	23.57	21.81	20.00	19.00	17.74	16.68	22.78
FACT	58.43	50.92	47.48	44.39	41.48	39.04	36.78	34.87	33.26	42.96
NG-FSCIL	57.96	47.10	45.99	44.32	41.94	39.55	36.64	34.38	32.64	42.28
WaRP	59.30	52.33	48.14	45.17	42.12	39.24	37.23	35.18	33.56	43.59
PFR	59.78	51.65	48.14	45.91	41.13	40.13	38.20	37.28	36.01	44.25
Ours	**67.37**	**57.94**	**55.04**	**52.64**	**49.43**	**46.91**	**44.80**	**42.78**	**41.13**	**50.89**

TABLE IV
COMPARED WITH SOTA METHODS ON AIRCRAFT.

Method	Acc. in each session(%)↑									AA↑
	0	1	2	3	4	5	6	7	8	
CEC	50.61	43.50	40.32	37.26	34.93	33.95	32.15	30.17	29.57	36.94
C-FSCIL	56.45	48.84	43.40	39.71	36.52	33.62	31.33	29.28	28.28	38.60
FACT	55.95	49.19	45.25	41.53	38.06	35.58	34.31	32.64	31.60	40.46
NG-FSCIL	54.53	46.42	42.76	38.85	36.39	35.14	31.95	30.66	28.75	38.38
WaRP	55.11	49.01	44.76	41.34	37.82	36.92	35.78	33.75	32.86	40.82
PFR	59.94	52.80	47.66	43.32	39.61	38.16	36.36	35.22	34.42	43.05
Ours	**65.50**	**60.36**	**56.34**	**51.68**	**48.88**	**45.19**	**42.71**	**39.92**	**37.96**	**49.84**

TABLE V
COMPARED WITH SOTA METHODS ON MINI-IMAGENET.

Method	Acc. in each session(%)↑									AA↑
	0	1	2	3	4	5	6	7	8	
iCaRL	61.31	46.32	42.94	37.63	30.49	24.00	20.89	18.80	17.21	33.29
TOPIC	61.31	50.09	45.17	41.16	37.48	35.52	32.19	29.46	24.42	39.64
FSLL	68.85	63.14	59.24	55.23	52.24	49.65	47.74	45.23	43.92	53.91
Liu et al.	71.84	67.12	63.21	59.77	57.01	53.95	51.55	49.52	48.21	58.02
DSN	68.95	63.46	59.78	55.64	52.85	51.23	48.90	46.78	45.89	55.94
CEC	72.52	67.23	63.16	59.67	56.76	53.68	51.18	49.39	47.84	57.94
PFR	72.37	67.35	63.24	59.80	56.74	53.85	51.72	49.61	48.12	58.08
Ours	**79.77**	**74.86**	**70.70**	**67.60**	**65.08**	**62.01**	**58.90**	**56.66**	**55.40**	**65.66**

TABLE VI
COMPARED WITH SOTA METHODS ON CIFAR100.

Method	Acc. in each session(%)↑									AA↑
	0	1	2	3	4	5	6	7	8	
iCaRL	64.10	53.28	41.69	34.13	27.93	25.06	20.41	15.48	13.73	32.87
TOPIC	64.10	55.88	47.07	45.16	40.11	36.38	33.96	31.55	29.37	42.62
FSLL	66.76	55.52	52.20	49.17	46.23	44.64	43.07	41.20	39.57	48.04
Liu et al.	74.40	**70.20**	**66.54**	**62.51**	**59.71**	56.58	**54.52**	52.39	50.14	60.77
DSN	73.00	68.83	64.82	62.24	59.16	56.96	54.04	51.57	49.35	60.00
CEC	72.52	68.49	64.70	60.71	57.54	54.87	52.87	50.70	48.59	59.00
PFR	74.12	69.68	66.00	62.05	59.13	56.22	54.00	51.59	49.50	60.25
Ours	**75.82**	69.77	66.26	62.39	59.70	56.58	54.44	**52.64**	**50.58**	**60.91**