北京人才发展战略研究院
BEIJING INSTITUTE OF TALENT DEVELOPMENT STRATEGY

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2026

全球顶尖科学家流动与合作报告

Global Mobility and Collaboration of Top Scientists

北京人才发展战略研究院
Beijing Institute of Talent Development Strategy

寄语

顶尖科学家的流动是科研合作与交流的重要基础。他们每一次流动，既包含物理空间的迁移，也涵盖智力资源的交融——都是国际科研合作在空间与知识维度上的动态延展，都在催生更紧密的合作网络，推动知识跨界传播与科研范式深度融合，是全球创新要素高效配置的关键引擎。

《全球顶尖科学家流动与合作报告 2026》以洲际、国家、城市之间的交流为主线，揭示了流动与合作互为表里、彼此赋能的丰富内涵，描绘了顶尖科学家如何在流动中编织全球科研合作的图景。

北京人才发展战略研究院作为专注于人才研究的新型智库，致力于为全球人才治理提供前瞻洞见与中国方案。愿以此报告为桥梁，汇聚各方智慧，携手共筑开放共赢的全球科研生态，共同把握顶尖智力资源配置图景，彰显中国智库的责任与担当。



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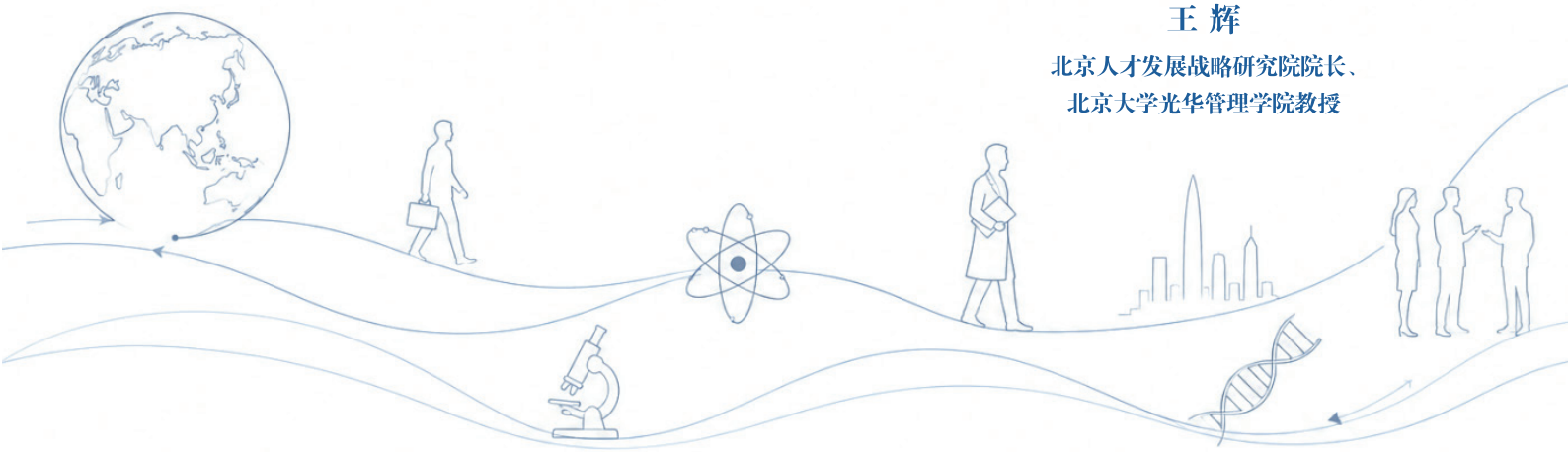

寄语

当前，全球创新格局与产业版图正经历深刻重塑。顶尖科学家的流动，已不仅仅是学术界的风向标，更是国际科研合作不断深化的生动体现。他们的每一次流动，都在不同国家、城市之间搭建起合作桥梁，激发创新活力重新布局，持续增强各经济体的发展潜能。

《全球顶尖科学家流动与合作报告 2026》基于最新数据，刻画出顶尖科研人才在洲际、国家、城市中的交流与合作图景。这股全球顶尖智力资源的移动，不仅清晰呈现当前全球科研合作网络与创新版图的变化特征，更将悄然塑造全球创新网络中最活跃的节点。

我们始终相信，全球科技创新需要更加开放、包容、富有韧性的科研人才发展生态。这份报告为此贡献了富有启发的观察视角。期待它能推动学术界、产业界与政策制定者之间更深入的对话，共同营造有利于全球知识流动与创新合作的良好环境。



Bettina Schaller

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摘要

在科技全球化深入推进、国际科研合作网络持续织密的时代背景下，兼具广泛学术影响力与卓越创新能力的顶尖科学家的国际流动，已成为透视全球创新活力和科研跨区域融合的重要风向标。

《全球顶尖科学家流动与合作报告 2026》基于 2024 至 2025 年发文机构变更数据，揭示了全球高端科研人才在洲际、国家（地区）、城市及重点学科领域的流动与合作特征。核心发现如下：

洲际层面，洲际流动是顶尖科学家国际流动的主要形式。亚洲、欧洲、北美洲构成流动与合作的主要区域，各洲流入流出基本平衡，反映出洲际科研合作的相对均衡性。

国家层面，全球顶尖科学家流动与合作的国家（地区）分布呈现集聚态势。美国、中国、英国、法国、德国、瑞士等国家既是国际科研合作的重要发起方，也是主要贡献者。中美间国际科研合作活跃度突出、意愿强烈。此外，英国、加拿大、新加坡等国家与美国、中国大陆之间，均建立了较为密集的交流合作通道。

城市层面，国际城市间顶尖科学家的流动与合作不局限于少数中心城市，而呈现出更广泛、更多元的连接网络。伦敦、北京、新加坡等城市显示出较高的国际科研合作活跃度。中国城市在全球科研合作中的表现更加积极。此外，山景城（硅谷）与伦敦之间的顶尖科学家交流合作最为频繁。

重点学科领域层面，近两年，基础科学、计算机科学及生物医学领域的国际科研合作在不同区域各有侧重：基础科学方面，北京与新加坡之间的交流较为密集；计算机科学方面，山景城（硅谷）与伦敦之间合作频繁；生物医学方面，美国城市与全球重点城市之间的互动较为活跃。

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一、目的与意义

当今世界，新一轮科技革命和产业变革加速演进，各类新兴前沿技术正深刻重塑全球科技创新格局与产业发展版图。基础研究深度拓展、重大科学问题全球化特征愈发凸显，科研交流合作已然成为科技创新的主流范式，更是人类突破认知边界、摆脱发展困境的必由之路。

顶尖科学家深耕前沿领域、洞悉学科趋势、引领技术变革，作为科技人力资本中最活跃、最具能量的组成部分，通过跨国流动、协作攻关、智力碰撞，构建了全球科研合作的桥梁与纽带。“科学家流动与合作”由此成为全球范围内备受瞩目的重要议题。联合国教科文组织（UNESCO）、经合组织（OECD）等机构的数据显示[①]，国际合著论文比例超过20%，呈现持续走高态势，国际科研合作稳步增长。斯坦福大学、《自然》期刊等机构近期多项研究表明[②]，全球顶尖人才流动格局呈现“多极发展”态势。

《全球顶尖科学家流动与合作报告2026》致力于开展人才领域深层次、前瞻性研究，采用2024至2025年间世界范围内顶尖科学家发文机构跨境变更数据，系统呈现该群体的流动轨迹、主要国家及城市间合作现状，以及基础科学、计算机科学、生物医学等重点学科领域顶尖科学家流动与合作态势，为推动科技人才交流合作与融合发展贡献中国智库的智慧与力量。

① 资料来源：UNESCO, *UNESCO Science Report: The Race Against Time for Smarter Development* (Paris: UNESCO Publishing, 2021); OECD, *OECD Science, Technology and Innovation Outlook 2023: Enabling Transitions in Times of Disruption* (Paris: OECD Publishing, 2023), https://doi.org/10.1787/0b55736e-en.

② 资料来源：Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2026* (Stanford, CA: Stanford University, 2026), 423; Alexandra Witze, “75% of US Scientists Who Answered Nature Poll Consider Leaving,” *Nature* 640, no. 8058 (2025): 298 - 299, https://doi.org/10.1038/d41586-025-00938-y.

二、数据与方法

本报告数据来自爱思唯尔（Elsevier）旗下 Scopus 数据库。“顶尖科学家”须同时满足以下两项标准：（1）过去十年内[①]，以第一作者或通讯作者身份发表论文的 FWCI 不低于 1 或至少有一篇论文进入全球同年度、同学科的前 1% 高被引文献行列[②]；（2）在其所属的二级学科中[③]，按第一作者或通讯作者发文的引用排名位于全球前 2%。

报告的分析对象为 2024 年 1 月至 2025 年 12 月有发文记录的顶尖科学家，以“发文机构跨境变更”作为判断其是否发生国际流动与合作的主要依据，共获得有效数据 11431 条。报告采用分数计数法对数据进行标准化处理，计算得到全球顶尖科学家在不同空间尺度（大洲、国家 / 地区及城市[④]）下的“流入规模”“流出规模”以及“流动规模”[⑤]，为量化评估国际科研合作活跃度提供了全新视角。

其中，“流动”涵盖跨境地域空间上的“物理流动”，以及通过全球合作网络实现知识生产的“智力流动”；“流入”表征某一主体吸引全球顶尖科学家并与其建立科研合作关系，而“流出”表征某一主体向全球输出顶尖科学家并融入国际科研合作网络。

① 注：指 2016 至 2025 年间。

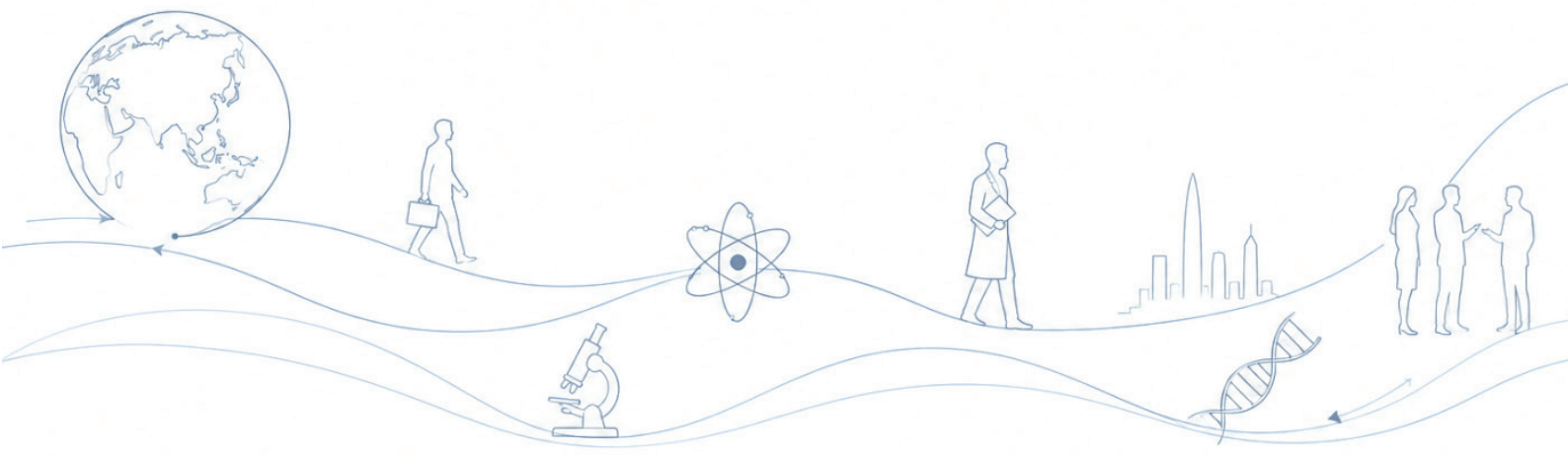
② 注：FWCI 即 Field-Weighted Citation Impact（领域归一化引用影响力），是衡量学者文献影响力的归一化指标，“不低于 1”则代表学者的文献引用数恰好或超过预期的全球平均水平。

③ 注：学科分类依据爱思唯尔（Elsevier）开发的 All Science Journal Classification Codes（ASJC）分类体系进行，该体系为分级分类系统，共包含 27 个一级学科大类与 334 个二级学科子类。

④ 注：城市信息依据文献记录中作者所属机构所在地确定，对于欧美地区，未进行都市圈层面的归并。

⑤ 注：流动规模即流入规模与流出规模之和。

三、全球流动顶尖科学家·群像分析



（一）国家（地区）分布

顶尖科学家科研合作网络共覆盖全球 160 个国家（地区）。从参与合作的国家（地区）数量看（见图 3–1），亚洲占比最高为 36.8%，其次为欧洲（36.3%）、北美洲（18.0%）、大洋洲（4.6%）、非洲（2.7%）和南美洲（1.6%）。

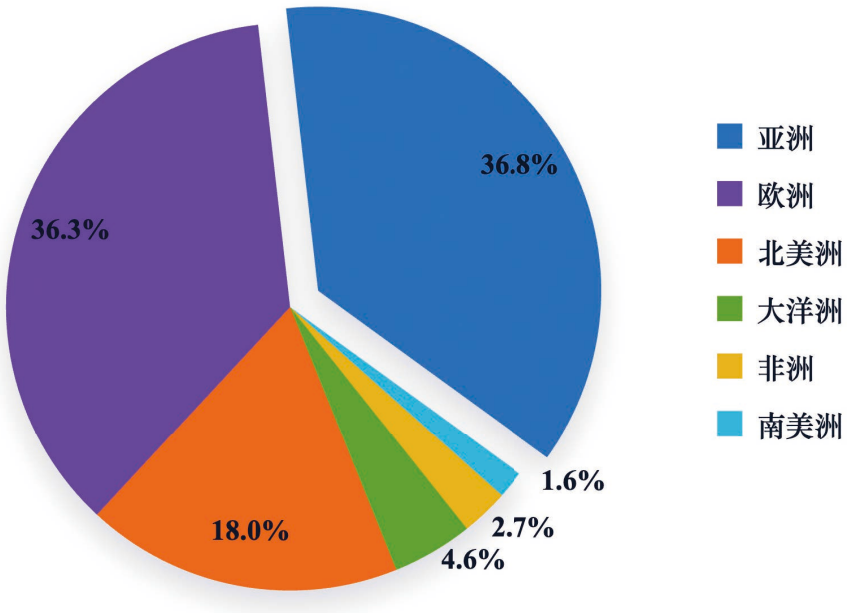


图 3-1　国家（地区）分布

（二）跨机构合作情况

如图 3–2、3–3 所示，全球流动顶尖科学家以学术机构、医疗机构及企业身份署名的文章比例分别为 99.1%、23.3%、7.2%[①]。超四分之一的顶尖科学家拥有多机构署名记录，跨机构合作特征明显。其中，19.8% 为“学术机构 + 医疗机构”、4.0% 为“学术机构 + 企业”。

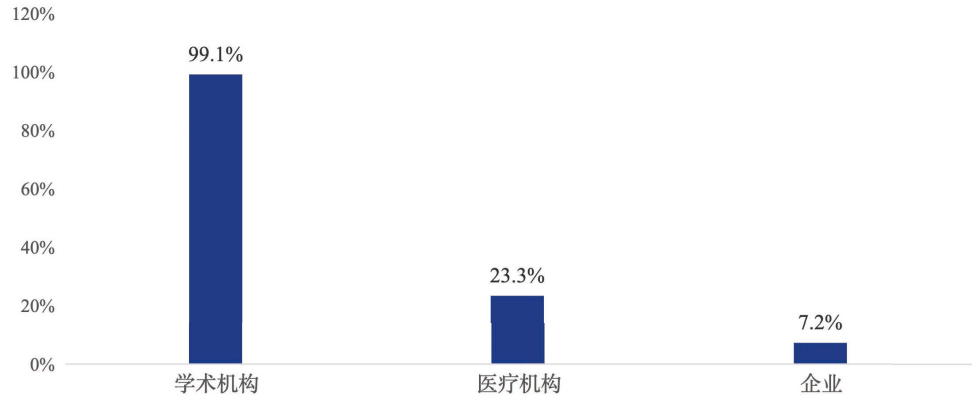


图 3-2　文章署名机构分布

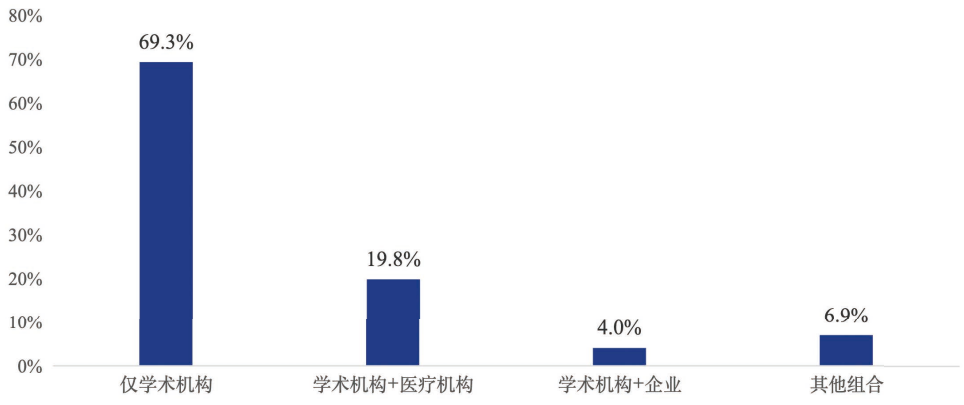


图 3-3　跨机构合作情况

① 注：存在同一顶尖科学家采用不同身份署名文章的情况。

（三）职龄分布

全球流动顶尖科学家的平均职业年龄为19.9年。82.8%的国际流动发生在职业生涯的前30年，其中，近半数（47.5%）集中在职业生涯的第11到第20年（见图3–4）。若以博士平均毕业年龄31岁作为参照[①]，则顶尖科学家高频参与国际流动与合作的年龄区间为42至51岁。

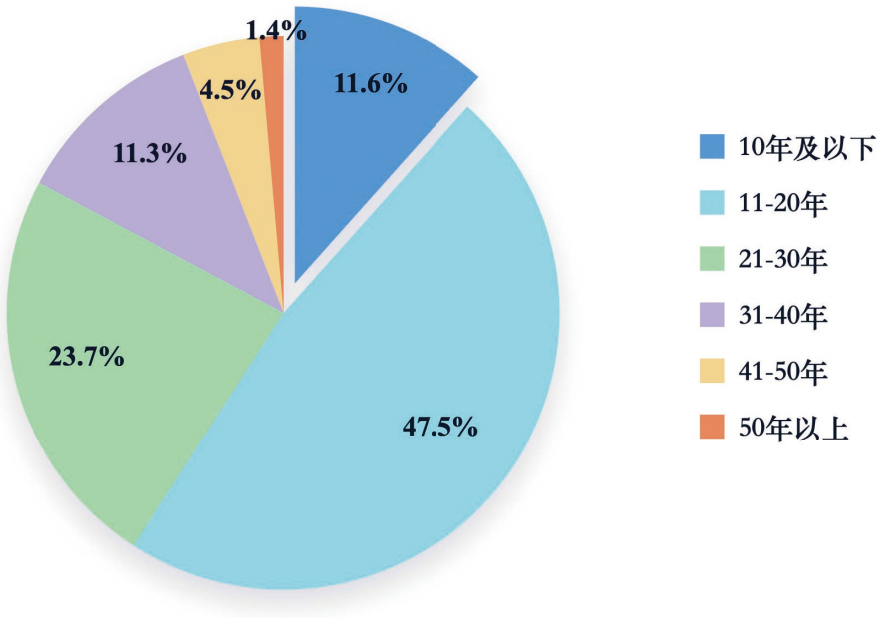


图3-4　职业年龄分布

① 资料来源：National Center for Science and Engineering Statistics, *Doctorate Recipients from U.S. Universities: 2023*, NSF 25–300 (Alexandria, VA: National Science Foundation, 2024), table 3–7.

（四）学科领域活跃度

如图 3–5 所示，材料科学、化学、计算机科学领域的顶尖科学家参与国际流动与合作的活跃度较高[①]。

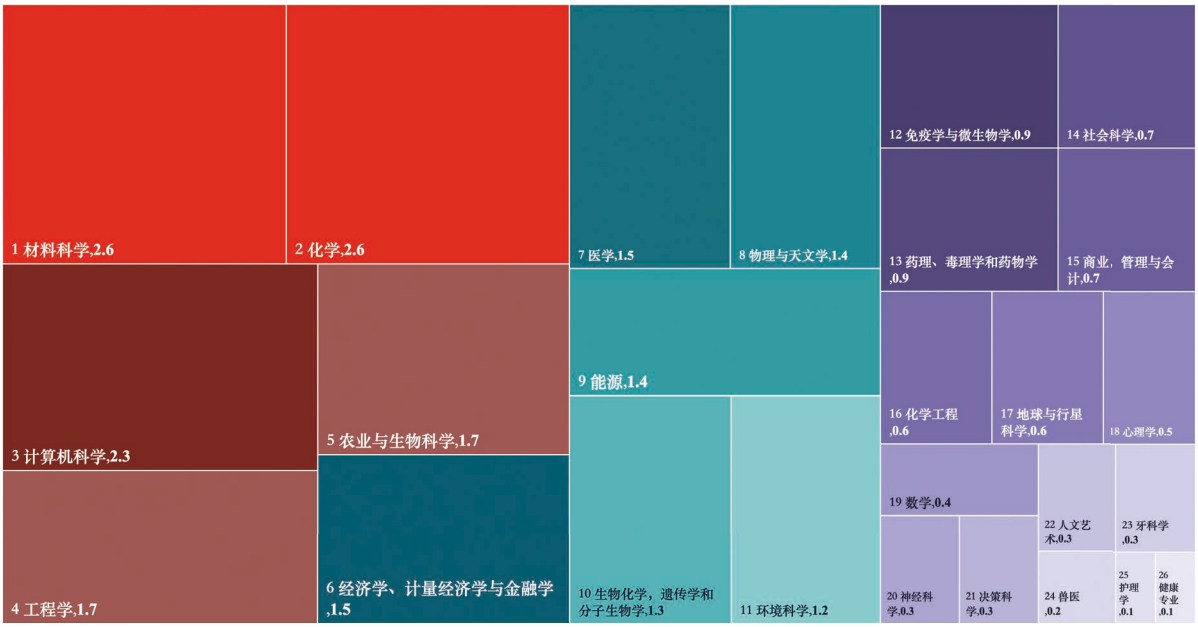


图 3-5　学科领域活跃度

① 注：“学科领域活跃度”计算方法为某学科在样本中的实际观测频次与该学科的期望频次之比。比值越大，表明该学科的活跃度越强。

（五）科研表现

全球流动顶尖科学家的生涯平均发文量约为189篇，生涯平均H指数达40[①]。表3–1显示，与2024年相比，2025年发文数量均值总体保持稳定，前5%影响力期刊发文量有所增长[②]，体现国际流动与合作对科研表现的积极影响。

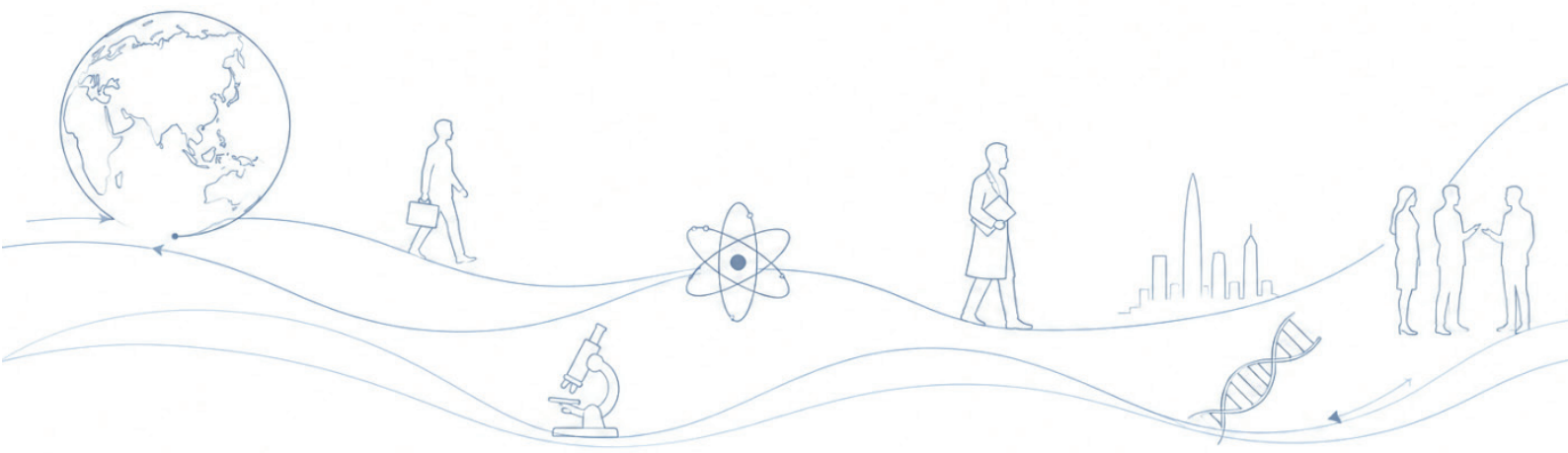
表3-1　2024与2025年流动顶尖科学家科研绩效

指标	2024年	2025年	对比
发文数量均值	15.37篇	15.38篇	基本持平
前5%影响力期刊发文量	96055篇	97406篇	增长

① 注：H指数即Hirsch指数，一种用于综合评估研究人员的学术产出数量与影响力混合量化的指标。

② 注：前5%影响力期刊发文量指学者发表于其所属学科领域内CiteScore百分位前5%期刊的数量。

四、全球顶尖科学家流动与合作态势



（一）洲际和洲内情况

洲际流动成为顶尖科学家国际流动的主要方式。2024 至 2025 年，全球顶尖科学家洲际流动规模（6984 人）高于洲内流动规模（4447 人）。亚洲、欧洲、北美洲是顶尖科学家洲际流动与合作的主要区域，三大洲间的流动占洲际流动总规模的 73.7%。

亚洲、欧洲和北美洲的流入规模（亚洲 2158 人、欧洲 2057 人、北美洲 1901 人）与流出规模（欧洲 2056 人、亚洲 2018 人、北美洲 1908 人）均处于高位。全球各大洲流入流出基本平衡，体现了洲际科研合作的均衡性。

洲内流动方面，如图 4–1 所示，欧洲（2072 人）和亚洲（2014 人）合计占洲内流动总规模的 91.9%，高于北美洲（283 人）、非洲（34 人）、大洋洲（25 人）及南美洲（19 人）。

表 4-1　洲际洲内流动规模矩阵（单位：人）

流出＼流入大洲	亚洲	欧洲	北美洲	南美洲	大洋洲	非洲	流出规模
亚洲	**2014**	852	847	20	198	101	2018
欧洲	884	**2072**	835	76	173	88	2056
北美洲	886	842	**283**	53	85	42	1908
南美洲	20	88	51	**19**	6	1	166
大洋洲	228	178	118	3	**25**	9	536
非洲	140	97	50	2	11	**34**	300
流入规模	2158	2057	1901	154	473	241	6984

注：加粗数字代表“洲内流动规模”



图 4-1 顶尖科学家洲际和洲内流动与合作情况

（二）国家（地区）情况

全球顶尖科学家流动与合作的国家（地区）分布呈现集聚态势。表 4–2 显示，全球主要国家（地区）流动规模合计 2.2 万人，占全部国际流动规模的九成以上。前 5 名国家（地区）流动规模占前 50 名国家（地区）流动规模的 47.9%。

表 4-2　主要国家（地区）顶尖科学家国际科研合作活跃度

国家（地区）	流动规模（人）	流入规模（人）	流出规模（人）
美国	3421	1741	1680
中国大陆	2579	1381	1198
英国	1891	939	952
德国	1132	552	580
澳大利亚	965	455	510
加拿大	889	413	476
意大利	673	340	333
法国	624	324	300
瑞士	540	250	290
荷兰	534	255	279
西班牙	520	274	246
印度	492	251	241
新加坡	467	222	245
韩国	416	198	218
日本	367	174	193
沙特阿拉伯	344	184	160
瑞典	318	156	162
比利时	303	139	164
巴基斯坦	278	123	155
丹麦	271	137	134
马来西亚	248	110	138
中国香港	210	121	89
伊朗	203	84	119
奥地利	197	104	93
南非	187	95	92
阿联酋	186	112	74
巴西	180	84	96
爱尔兰	171	81	90

续表

国家（地区）	流动规模（人）	流入规模（人）	流出规模（人）
挪威	171	87	84
芬兰	161	81	80
埃及	153	57	96
波兰	141	73	68
土耳其	136	65	71
葡萄牙	133	69	64
俄罗斯	120	49	71
以色列	118	60	58
中国台湾	111	55	56
希腊	107	57	50
泰国	101	50	51
孟加拉国	95	43	52
捷克	92	54	38
新西兰	89	41	48
越南	78	38	40
印度尼西亚	68	37	31
智利	68	29	39
约旦	64	38	26
尼日利亚	62	27	35
卡塔尔	61	28	33
黎巴嫩	54	26	28
匈牙利	53	29	24

从流动规模看，美国（3421 人）、中国大陆（2579 人）、英国（1891 人）、德国（1132 人）、澳大利亚（965 人）、加拿大（889 人）、意大利（673 人）、法国（624 人）、瑞士（540 人）和荷兰（534 人）表现突出。其中，流入规模较大的国家（地区）依次为：美国、中国大陆、英国、德国、澳大利亚、加拿大、意大利、法国、西班牙、荷兰；流出规模较大的国家（地区）依次为：美国、中国大陆、英国、德国、澳大利亚、加拿大、意大利、法国、瑞士、荷兰，上述国家（地区）既是国际科研合作的重要发起方，也是主要贡献者。

中国大陆与美国国际科研合作活跃度较为突出，合作意愿强烈（见图 4–2）。此外，英国、加拿大、新加坡等国家与美国、中国大陆也建立了较为发达的交流合作通道。

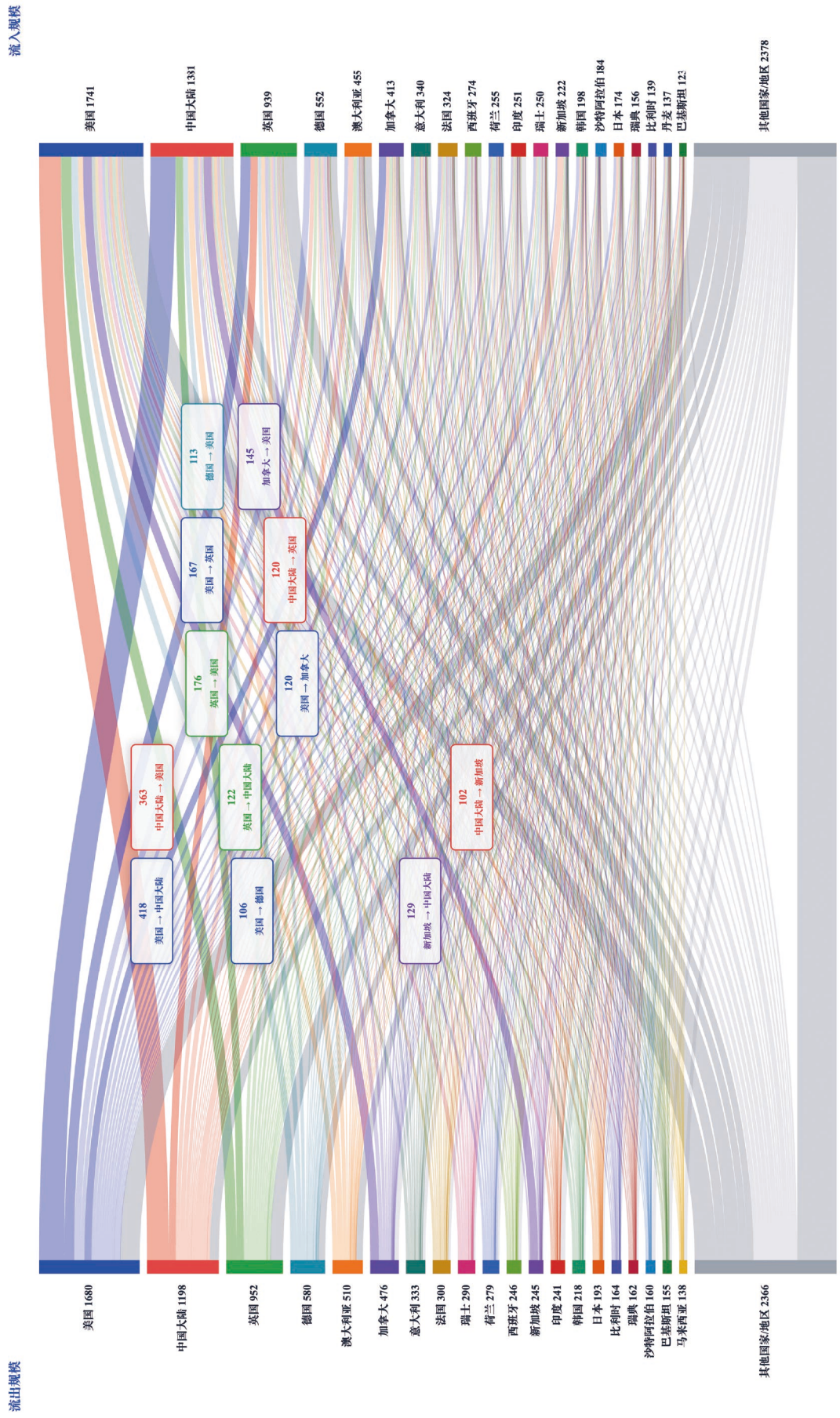


图 4-2 顶尖科学家国家（地区）间交流与合作

（三）城市情况

全球顶尖科学家流动与国际城市间的科研合作密不可分。表 4–3 显示，前 50 城市流动规模合计 7131 人，占全部国际城市间流动规模的 35.1%。与国家层面高度集中的流动表现相比，城市间顶尖科学家的国际流动与合作不局限于少数中心城市，存在更广泛、更多元的连接网络。

具体来看，伦敦（573 人）、北京（450 人）、新加坡（439 人）、波士顿（261 人）、上海（231 人）、纽约（227 人）、墨尔本（219 人）、首尔（214 人）、多伦多（205 人）、香港（198 人）流动规模表现突出，显示出较高的国际科研合作活跃度。

中国城市在参与全球科研合作的表现更加积极。在流动规模前 50 的城市中，中国城市占据 10 席，流动规模合计 1681 人，占前 50 城市流动总规模的 23.6%。从城市间国际科研合作活跃度看（见图 4–3），山景城（硅谷）与伦敦之间的顶尖科学家交流合作最为频繁。

表 4-3　主要城市顶尖科学家国际科研合作活跃度

城市	流动规模（人）	流入规模（人）	流出规模（人）
伦敦	573	285	288
北京	450	228	222
新加坡	439	208	231
波士顿	261	132	129
上海	231	122	109
纽约	227	118	109
墨尔本	219	110	109
首尔	214	104	110
多伦多	205	104	101
香港	198	115	83
悉尼	192	94	98
巴黎	176	90	86
苏黎世	155	64	91
剑桥	153	72	81
南京	153	91	62
牛津	135	68	67
杭州	129	71	58
广州	124	62	62
布里斯班	122	54	68

续表

城市	流动规模（人）	流入规模（人）	流出规模（人）
蒙特利尔	114	57	57
慕尼黑	111	57	54
武汉	111	58	53
斯德哥尔摩	108	57	51
维也纳	107	55	52
深圳	105	55	50
柏林	104	51	53
巴塞罗那	104	51	53
马德里	100	52	48
阿姆斯特丹	97	48	49
斯坦福	94	52	42
都柏林	93	48	45
米兰	92	47	45
成都	90	51	39
西安	90	51	39
东京	90	38	52
哥本哈根	90	45	45
鲁汶	88	41	47
德黑兰	86	33	53
利雅得	85	44	41
埃德蒙顿	84	18	66
休斯敦	81	50	31
洛杉矶	81	43	38
罗马	79	43	36
日内瓦	77	42	35
洛桑	77	33	44
阿布扎比	73	45	28
温哥华	69	36	33
巴尔的摩	66	34	32
爱丁堡	65	35	30
曼彻斯特	64	32	32

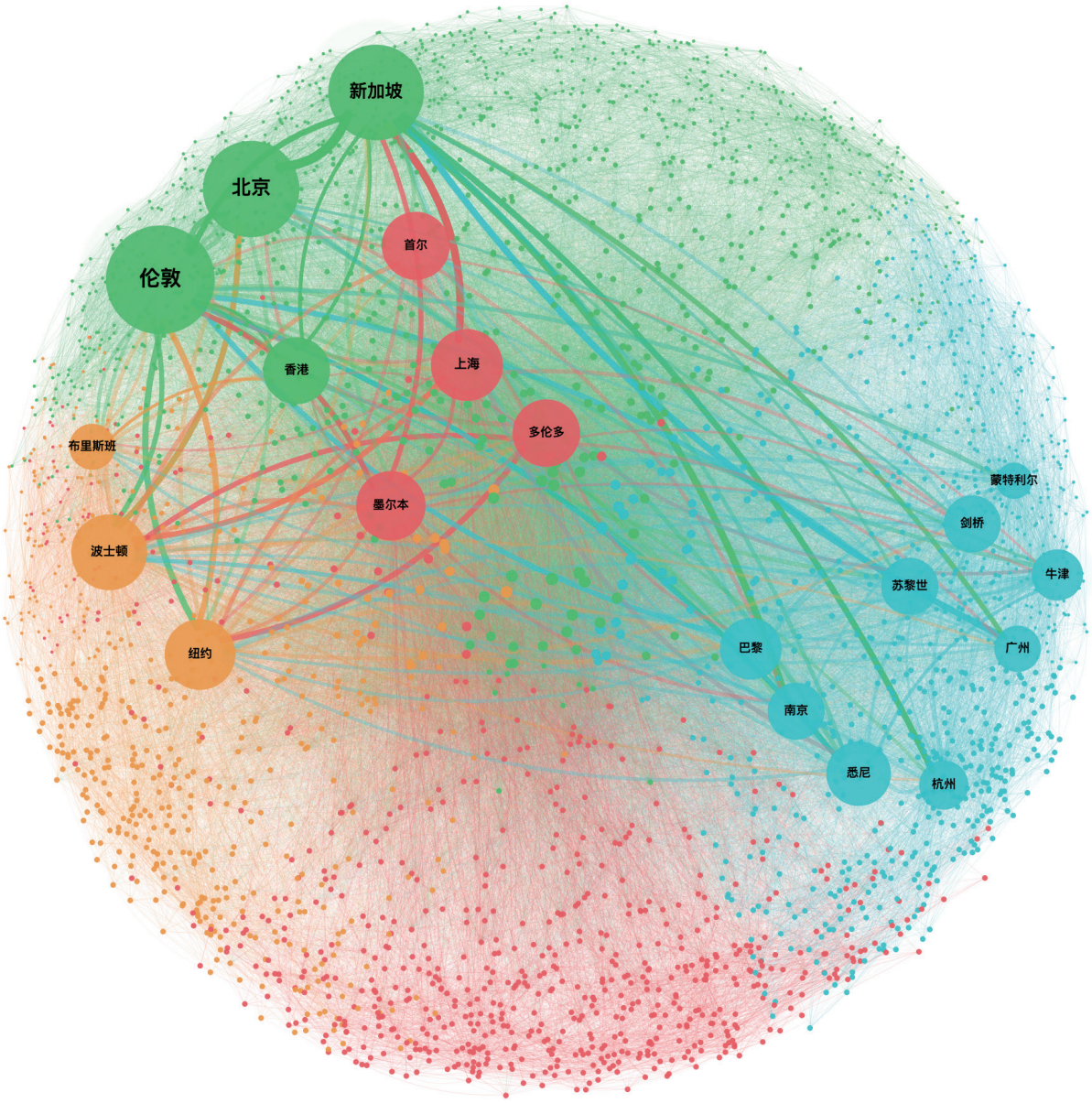


图 4-3　顶尖科学家城市间流动与合作

（四）重点学科领域情况

报告识别并分析了基础科学、计算机科学、生物医学等学科领域顶尖科学家国际流动与合作情况。

1. 基础科学

（1）洲际和洲内情况

如表 4–4 所示，2024 至 2025 年，全球顶尖基础学科领域科学家洲际流动规模（528 人）高于洲内流动规模（344 人）。北美洲、欧洲和亚洲间的流动规模约占全球洲际流动的 85.8%。

从流入规模看，亚洲（208 人）、北美洲（169 人）、欧洲（121 人）较高。从流出规模看，欧洲（179 人）、亚洲（164 人）、北美洲（140 人）较高。

洲内流动方面，亚洲（233 人）占全球洲内流动比例近七成，表现出更强的科研合作活跃度（见图 4–4）。

表 4-4　基础科学洲际洲内国际科研合作活跃度矩阵（单位：人）

流出 \ 流入大洲	亚洲	欧洲	北美洲	南美洲	大洋洲	非洲	流出规模
亚洲	**233**	73	82	0	0	9	164
欧洲	82	**98**	82	0	12	3	179
北美洲	97	37	**10**	2	3	1	140
南美洲	1	4	2	**2**	0	0	7
大洋洲	17	4	2	0	**0**	0	23
非洲	11	3	1	0	0	**1**	15
流入规模	208	121	169	2	15	13	528

注：加粗数字代表“洲内流动规模”

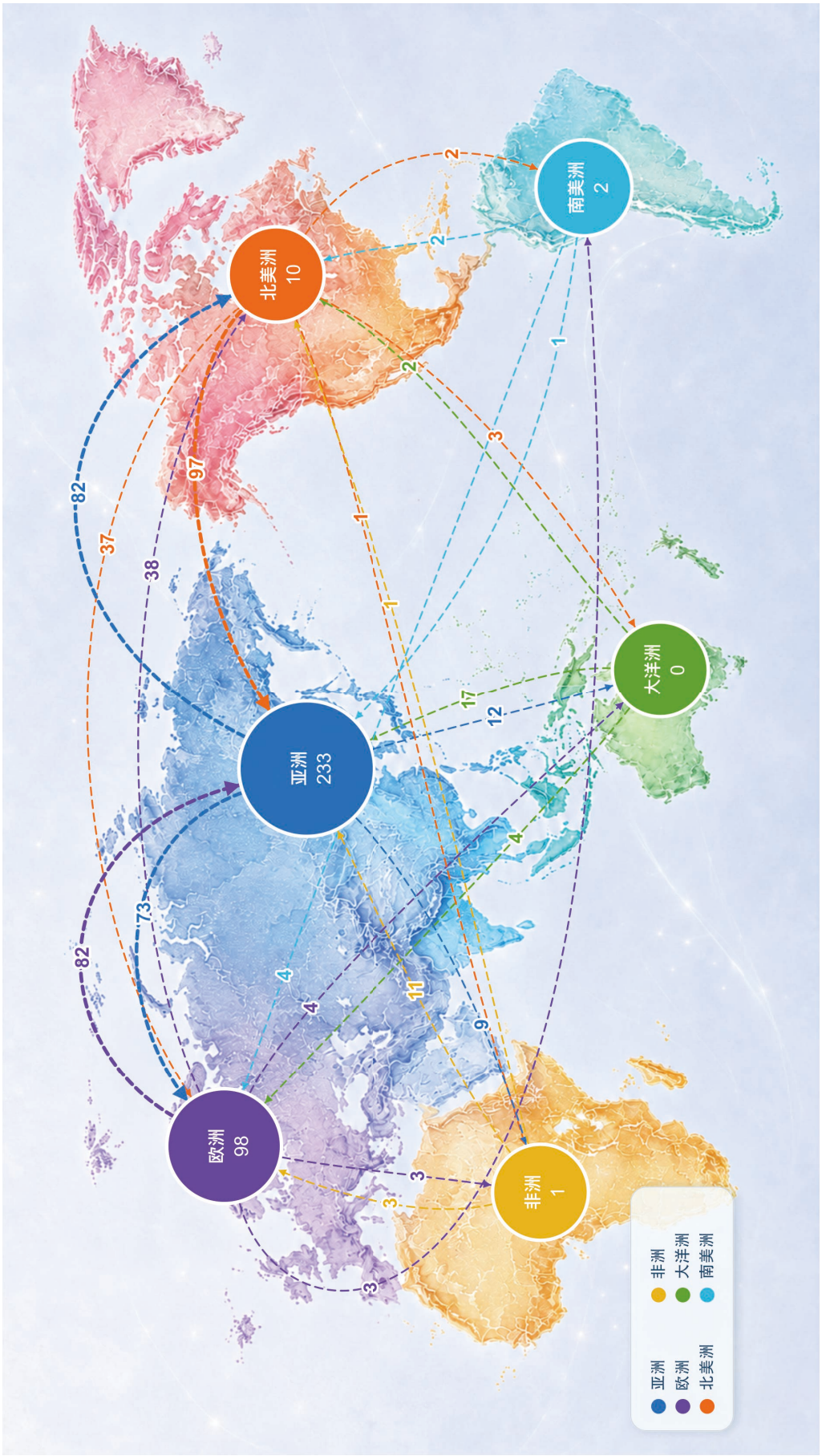


图 4-4 基础科学顶尖科学家洲际和洲内流动与合作情况

（2）城市情况

主要城市基础科学顶尖科学家国际科研合作活跃度见表 4–5，新加坡（65 人）、北京（56 人）、上海（34 人）、香港（25 人）、在该领域国际流动与合作表现较为活跃。近两年，新加坡与中国城市间的交流合作比较密集（见图 4–5）。

表 4-5　主要城市基础科学顶尖科学家国际科研合作活跃度

城市	流动规模（人）	流入规模（人）	流出规模（人）
新加坡	65	30	35
北京	56	29	27
上海	34	20	14
香港	25	13	12
首尔	21	12	9
伦敦	19	11	8
杭州	18	9	9
天津	17	10	7
剑桥	17	8	9
南京	16	11	5
多伦多	16	6	10
广州	14	7	7
图瓦尔	13	7	6
伯克利	13	6	7
深圳	12	6	6
武汉	12	6	6
合肥	11	8	3
埃文斯顿	11	7	4
纽约	11	4	7
斯坦福	10	6	4
波士顿	10	6	4
成都	10	6	4
洛桑	10	4	6
苏黎世	10	4	6
西安	9	4	5
布里斯班	9	4	5
悉尼	9	3	6

续表

城市	流动规模（人）	流入规模（人）	流出规模（人）
青岛	8	5	3
洛杉矶	8	4	4
巴黎	8	4	4
东京	8	4	4
筑波	8	2	6

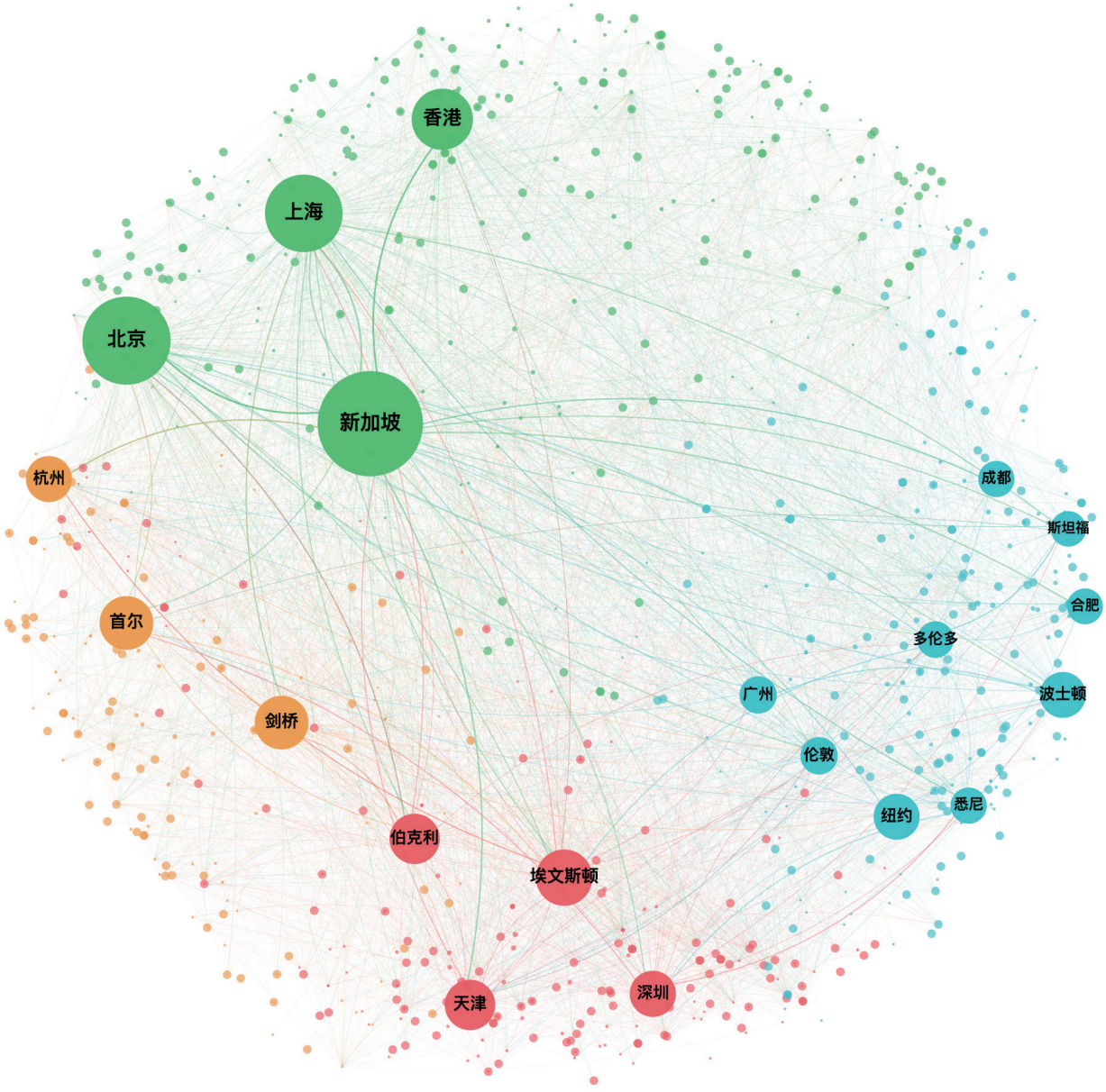


图 4-5　基础科学顶尖科学家城市间流动与合作

2. 计算机科学

（1）洲际和洲内情况

2024 至 2025 年，全球顶尖计算机科学家洲际流动规模（601 人）高于洲内（413 人）。其中，亚洲、欧洲和北美洲间的流动规模占全球洲际流动的 83.5%，对该学科全球科研合作做出主要贡献。

从流入规模看，亚洲（235 人）、欧洲（175 人）和北美洲（145 人）较高。从流出规模看，亚洲（216 人）、欧洲（170 人）和北美洲（162 人）较高。计算机科学顶尖科学家各洲流入流出基本平衡，体现了洲际科研合作的均衡性。

洲内流动方面，亚洲（284 人）和欧洲（105 人）规模较大，表现出更强的科研合作活跃度（见图 4–6）。

表 4-6　计算机科学洲际洲内国际科研合作活跃度矩阵（单位：人）

流出 \ 流入大洲	亚洲	欧洲	北美洲	南美洲	大洋洲	非洲	流出规模
亚洲	**284**	100	85	2	23	6	216
欧洲	102	**105**	57	3	6	2	170
北美洲	101	57	**16**	2	2	0	162
南美洲	2	6	0	**3**	0	0	8
大洋洲	21	7	1	0	**2**	0	29
非洲	9	5	2	0	0	**3**	16
流入规模	235	175	145	7	31	8	601

注：加粗数字代表“洲内流动与合作规模”



图 4-6 计算机科学顶尖科学家洲际和洲内流动与合作情况

（2）城市情况

主要城市计算机科学顶尖科学家国际科研合作活跃度见表 4–7，新加坡（76 人）、伦敦（72 人）、北京（57 人）、山景城（35 人）、香港（30 人）、上海（26 人）、苏黎世（24 人）、南京（23 人）、首尔（23 人）、杭州（21 人）在该领域国际流动与合作表现活跃。近两年，山景城（硅谷）与伦敦的交流合作比较密集（见图 4–7）。

表 4-7　主要城市计算机科学顶尖科学家国际科研合作活跃度

城市	流动规模（人）	流入规模（人）	流出规模（人）
新加坡	76	30	46
伦敦	72	40	32
北京	57	26	31
山景城	35	10	25
香港	30	18	12
上海	26	14	12
苏黎世	24	7	17
南京	23	17	6
首尔	23	11	12
杭州	21	11	10
西安	19	13	6
悉尼	18	10	8
成都	17	11	6
多伦多	17	10	7
都柏林	16	9	7
阿布扎比	16	8	8
深圳	15	8	7
武汉	15	8	7
广州	14	7	7
蒙特利尔	13	9	4
纽约	13	7	6
波士顿	12	4	8
图瓦尔	11	4	7
雷德蒙德	11	4	7
奥尔堡	11	3	8
合肥	10	5	5

续表

城市	流动规模（人）	流入规模（人）	流出规模（人）
剑桥	10	6	4
慕尼黑	10	3	7
重庆	8	5	3
哈尔滨	8	4	4

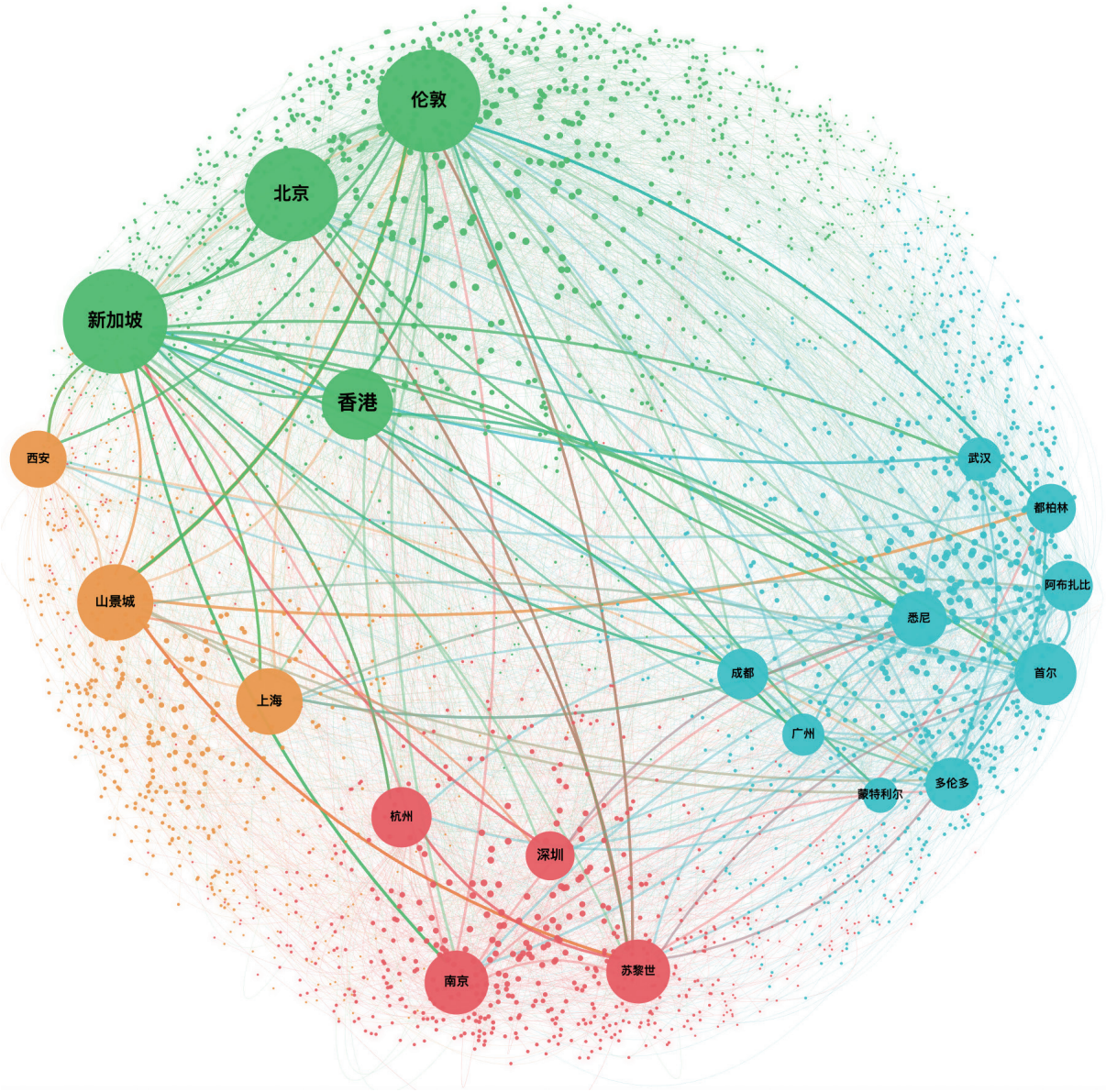


图 4-7　计算机科学顶尖科学家城市间流动与合作

3. 生物医学

（1）洲际和洲内情况

2024 至 2025 年，全球顶尖生物医学科学家洲际流动规模（1870 人）高于洲内流动规模（1042 人）。北美洲、欧洲和亚洲间的流动规模约占全球洲际流动的 74.1%，对该学科全球科研合作做出重要贡献。

从流入规模看，北美洲（647 人）、欧洲（625 人）、亚洲（359 人）较高。从流出规模看，欧洲（625 人）、北美洲（618 人）、亚洲（371 人）较高。生物医学科学家各洲流入流出基本平衡，体现了洲际科研合作的均衡性。

洲内流动方面，欧洲（746 人）占全球洲内流动比例超七成，高于其他大洲（见图 4–8）。

表 4-8　生物医学洲际洲内国际科研合作活跃度矩阵（单位：人）

流出 \ 流入大洲	亚洲	欧洲	北美洲	南美洲	大洋洲	非洲	流出规模
亚洲	**145**	135	192	4	28	12	371
欧洲	145	**746**	370	23	69	18	625
北美洲	166	378	**135**	21	39	14	618
南美洲	3	22	23	**4**	2	0	50
大洋洲	31	65	51	2	**9**	3	152
非洲	14	25	11	1	3	**3**	54
流入规模	359	625	647	51	141	47	1870

注：加粗数字代表“洲内流动规模”

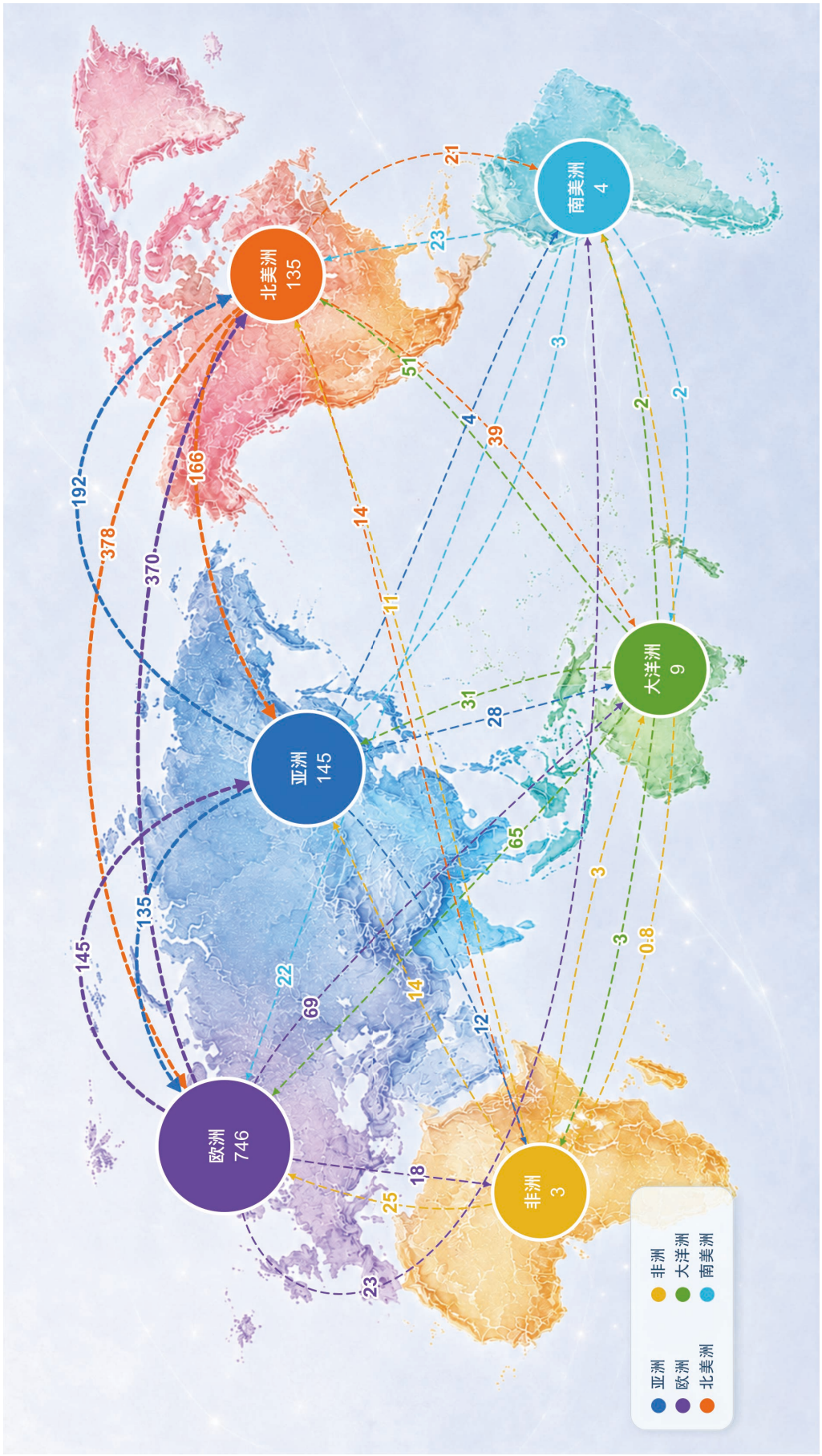


图 4-8 生物医学顶尖科学家洲际和洲内流动与合作情况

（2）城市情况

主要城市生物医学顶尖科学家国际科研合作活跃度见表 4–9，英国、美国城市在生物医学顶尖科学家国际流动与合作上有更积极表现。其中，伦敦、波士顿、纽约的流动规模分别为 209 人，149 人和 112 人。图 4–9 显示。近两年，美国城市与其他重点城市之间的交流合作更加活跃。

表 4-9　主要城市生物医学顶尖科学家国际科研合作活跃度

城市	流动规模（人）	流入规模（人）	流出规模（人）
伦敦	209	108	101
波士顿	149	82	67
纽约	112	57	55
多伦多	98	53	45
巴黎	85	42	43
墨尔本	78	39	39
新加坡	63	40	23
悉尼	63	33	30
米兰	55	31	24
马德里	48	26	22
牛津	47	23	24
阿姆斯特丹	47	21	26
埃德蒙顿	45	4	41
巴塞罗那	43	19	24
北京	42	20	22
剑桥	42	21	21
蒙特利尔	42	18	24
维也纳	40	20	20
休斯敦	39	23	16
斯德哥尔摩	38	21	17
苏黎世	38	20	18
首尔	38	17	21
慕尼黑	37	19	18
上海	35	13	22
鲁汶	35	20	15
哥本哈根	35	18	17

续表

城市	流动规模（人）	流入规模（人）	流出规模（人）
都柏林	35	17	18
洛杉矶	34	20	14
柏林	34	18	16
巴尔的摩	34	16	18

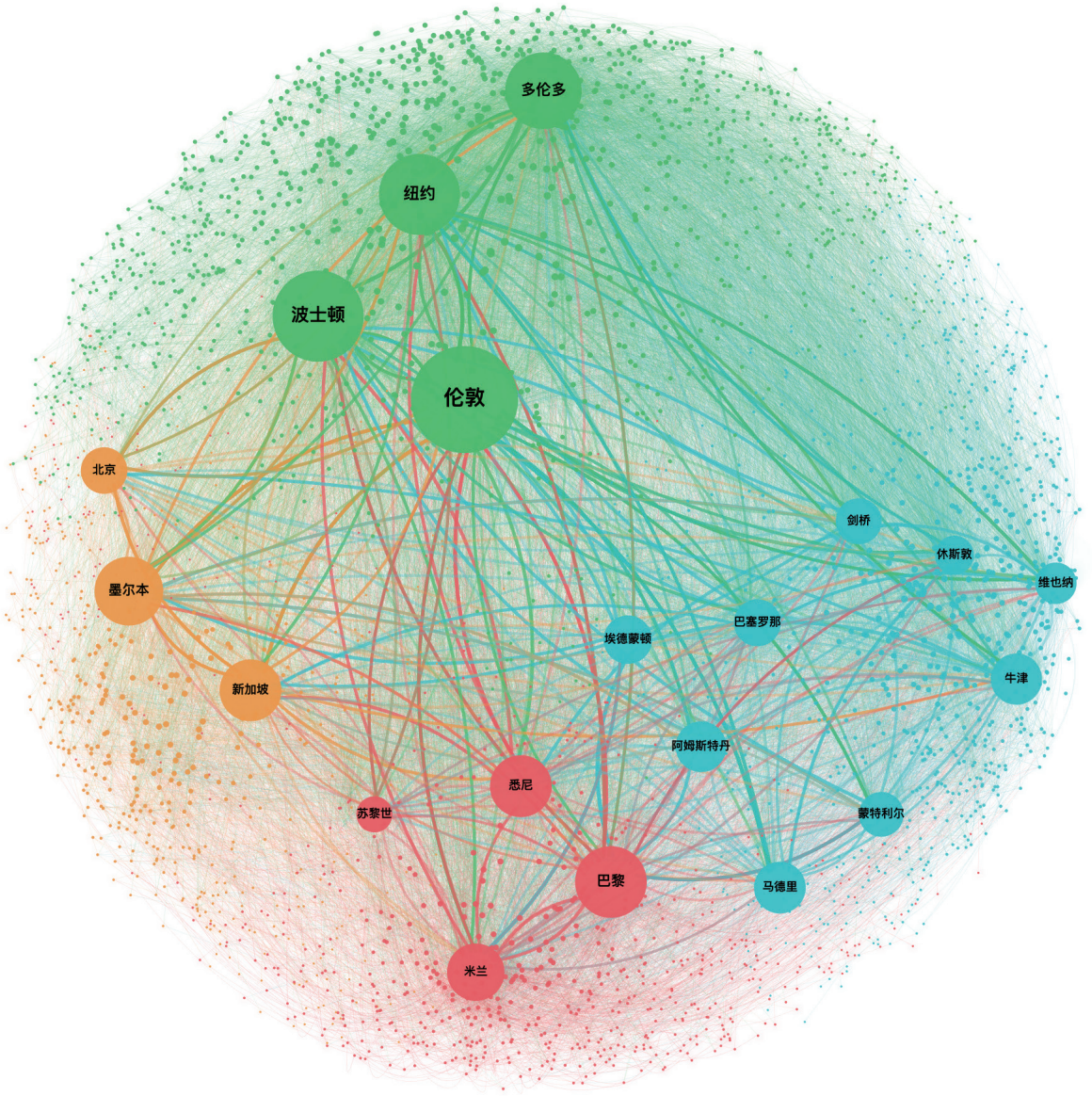


图 4-9　生物医学顶尖科学家城市间流动与合作

专家委员会

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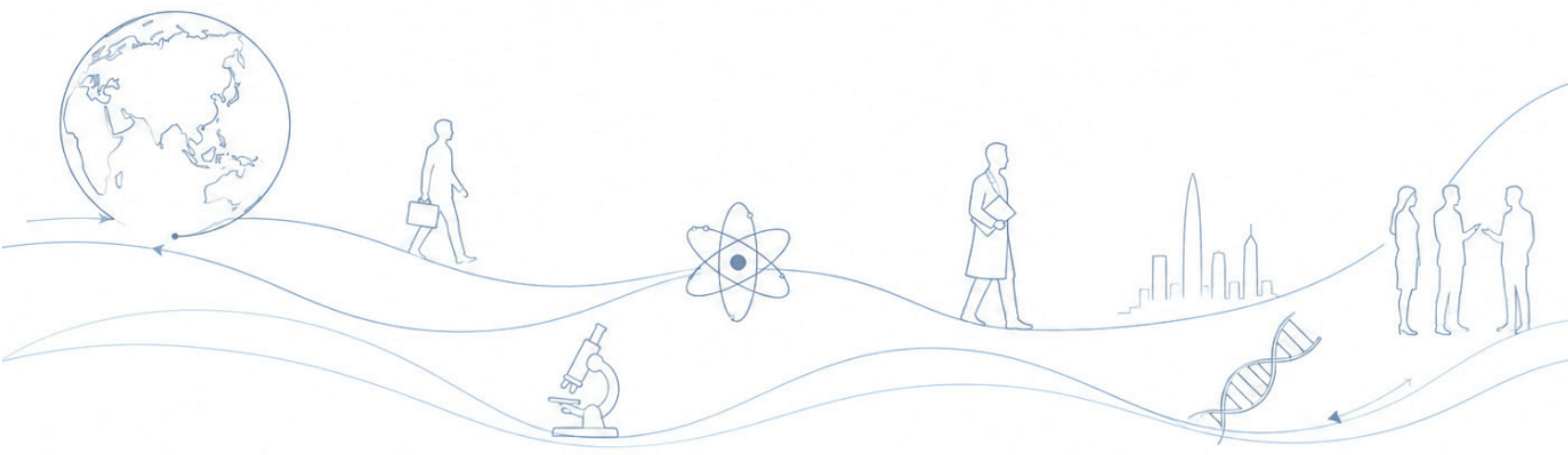

Dean's Foreword

The mobility of top scientists is an important foundation for research collaboration and exchange. Each instance of scientists flow involving both physical relocation and the integration of intellectual resources represents the dynamic expansion of international research collaboration across spatial and knowledge dimensions, helps build closer collaboration networks, advances the cross-boundary diffusion of knowledge and the deeper convergence of research paradigms, and serves as a key driver of the efficient allocation of global innovation resources.

Taking exchanges across continents, countries, and cities as its central thread, the Global Top Scientists Mobility and Collaboration Report 2026 explores the close relationship between mobility and collaboration, and maps how top scientists weave a global research collaboration landscape through mobility.

As a typical think tank dedicated to talent research, the Beijing Institute of Talent Development Strategy is committed to providing forward-looking insights and Chinese perspectives for global talent governance. We hope this report will serve as a bridge to bring together diverse expertise, support the joint development of an open and mutually beneficial global research ecosystem, and deepen shared understanding of the allocation of top intellectual resources, and demonstrate the responsibility and commitment of Chinese think tanks.



Hui WANG

Dean, Beijing Institute of Talent Development Strategy;

Professor, Guanghua School of Management, Peking University

Dean's Foreword

The global innovation landscape and industrial development patterns are undergoing profound transformation. The mobility of top scientists is no longer merely a barometer of academic trends; it is also a vivid reflection of deepening international research collaboration. Each instance of mobility builds bridges of collaboration between countries and cities, reshapes the distribution of innovation vitality, and strengthens the development potential of economies.

Based on the latest data, the Global Top Scientists Mobility and Collaboration Report 2026 maps the landscape of exchange and collaboration among top research talent across continents, countries, and cities. The movement of these global top intellectual resources not only clearly presents the changing characteristics of global research collaboration networks and the innovation landscape, but is also set to quietly shape the most active nodes in the global innovation network.

We believe that global scientific and technological innovation requires a more open, inclusive, and resilient ecosystem for research talent development. This report offers an insightful perspective in this regard. We hope it will encourage deeper dialogue among academia, industry, and policymakers, and support the creation of a favorable environment for global knowledge flows and innovation collaboration.



Bettina Schaller

Honorary Deputy Dean, Beijing Institute of Talent Development Strategy;
Senior Vice President, Group Head Public Affairs, The Adecco Group;
President, World Employment Confederation

Abstract

As the globalization of science and technology advances and international research collaboration networks become more closely connected, the international mobility of top scientists, who combine broad academic influence with outstanding innovation capacity, has become an important indicator of global innovation vitality and cross-regional research integration.

Drawing on data on changes in publication affiliations from 2024 to 2025, the Global Top Scientists Mobility and Collaboration Report 2026 examines the mobility and collaboration patterns of high-level research talent across continents, countries and regions, cities, and key disciplines. The main findings are as follows:

At the intercontinental level, intercontinental mobility is the main form of international mobility among top scientists. Asia, Europe, and North America are the main regions for mobility and collaboration. Inflows and outflows across continents are broadly balanced, reflecting the relative balance of intercontinental research collaboration.

At the country level, the distribution of global mobility and collaboration among top scientists is concentrated. The United States, China, the United Kingdom, France, Germany, Switzerland, and other countries are both important initiators of international research collaboration and major contributors to it. Research collaboration between China and the United States is particularly active. In addition, the United Kingdom, Canada, Singapore, and other countries have developed relatively dense exchange and collaboration channels with the United States and the Chinese mainland.

At the city level, the mobility and collaboration of top scientists among international cities are not limited to a small number of central cities, but form a broader and more diverse network of connections. London, Beijing, Singapore, and other cities show high levels of international research collaboration. Chinese cities are increasingly active in global research collaboration. In addition, exchanges and collaboration between Mountain View (Silicon Valley) and London are the most frequent instances.

In key disciplines, international research collaboration in basic sciences, computer science, and biomedical sciences has shown different regional emphases over the past two years. In basic sciences, exchanges between Beijing and Singapore are relatively intensive. In computer science, collabora-tion between Mountain View (Silicon Valley) and London is frequent. In biomedical sciences, interactions between US cities and major global cities are relatively active.

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I. Purpose and Significance

Nowadays, a new round of technological revolution and industrial transformation is accelerating. A wide range of emerging frontier technologies are reshaping the global landscape of scientific and technological innovation and industrial development. As basic research continues to expand in depth and major scientific questions increasingly take on global dimensions, research exchange and collaboration have become a mainstream paradigm for scientific and technological innovation, and an essential path for expanding the frontiers of knowledge and addressing development challenges.

Top scientists work at the forefront of their fields, have keen insight into disciplinary trends, and lead technological change. As one of the most energetic components of scientific and technological human capital, they build bridges and links in global research collaboration through cross-border mobility, collaborative research, and the exchange of ideas. As a result, "scientist mobility and collaboration" has become a major topic of global attention. Data from UNESCO, the OECD, and other institutions show that international co-authored papers account for more than 20% of publications and continue to rise,[①] indicating steady growth in international research collaboration. Recent studies and reports by Stanford University, Nature, and other sources suggest that the global mobility of top talent is becoming increasingly multipolar.[②]

The Global Top Scientists Mobility and Collaboration Report 2026 is committed to providing in-depth and forward-looking research in the field of talent development. Drawing on worldwide data on cross-border changes in the publication affiliations of top scientists from 2024 to 2025, it systematically presents the mobility trajectories of this group, the current state of collaboration among major countries and cities, and the mobility and collaboration patterns of top scientists in key disciplines such as basic sciences, computer science, and biomedical sciences. The report seeks to contribute Chinese think-tank insights and expertise to the exchange, collaboration, and integrated development of scientific and technological talent.

① Sources: UNESCO, *UNESCO Science Report: The Race Against Time for Smarter Development* (Paris: UNESCO Publishing, 2021); OECD, *OECD Science, Technology and Innovation Outlook 2023: Enabling Transitions in Times of Disruption* (Paris: OECD Publishing, 2023), https://doi.org/10.1787/0b55736e-en.

② Sources: Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2026* (Stanford, CA: Stanford University, 2026), 423; Alexandra Witze, "75% of US Scientists Who Answered Nature Poll Consider Leaving," *Nature* 640, no. 8058 (2025): 298–299, https://doi.org/10.1038/d41586-025-00938-y.

II. Data and Methodology

The data used in this report come from Elsevier's Scopus database. "Top scientists" are defined as researchers who meet both of the following criteria: (1) over the past ten years,[①] they have published, as first author or corresponding author, papers with an FWCI of at least 1,[②] or have at least one paper ranked among the global top 1% highly cited papers in the same year and discipline; and (2) within their secondary discipline,[③] they rank among the global top 2% by citations to papers published as first author or corresponding author.

The analysis covers top scientists with publication records from January 2024 to December 2025. "Cross-border changes in publication affiliation" are used as the main basis for identifying international mobility and collaboration, yielding 11,431 valid records. The report applies fractional counting to standardize the data and calculate inflow volume, outflow volume, and total mobility volume for top scientists at different spatial scales,[④] including continents, countries and regions, and cities.[⑤] This provides a new perspective for quantitatively assessing the level of activity in international research collaboration.

In this report, "mobility" covers both physical mobility across borders and intellectual mobility through knowledge production in global collaboration networks. "Inflow" indicates that an entity attracts top scientists from around the world and establishes research collaboration with them, while "outflow" indicates that an entity contributes top scientists to global research collaboration networks and participates in those networks.

① Note: This refers to the period from 2016 to 2025.

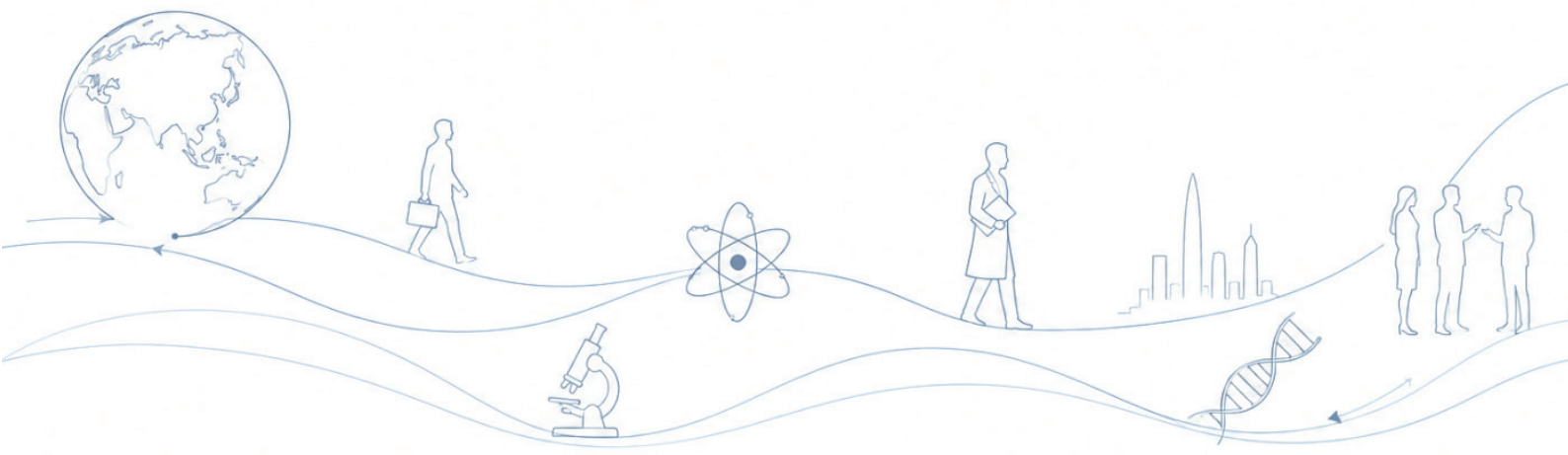
② Note: FWCI stands for Field-Weighted Citation Impact. It is a normalized indicator used to measure the citation impact of a researcher's publications. An FWCI of at least 1 means that the citation count of the researcher's publications meets or exceeds the expected global average.

③ Note: Disciplines are classified according to the All Science Journal Classification Codes (ASJC) system developed by Elsevier. This hierarchical classification system includes 27 broad subject areas and 334 secondary subject categories.

④ Note: Total mobility volume is the sum of inflow volume and outflow volume.

⑤ Note: City information is determined based on the location of the authors' affiliated institutions in publication records. For Europe and North America, no aggregation at the metropolitan-area level was applied.

III. Profile Analysis of Globally Mobile Top Scientists



(1) Distribution by Country and Region

The research collaboration network of top scientists covers 160 countries and regions worldwide. In terms of the number of countries and regions participating in collaboration (see Figure 3-1), Asia has the highest share, at 36.8%, followed by Europe (36.3%), North America (18.0%), Oceania (4.6%), Africa (2.7%), and South America (1.6%).

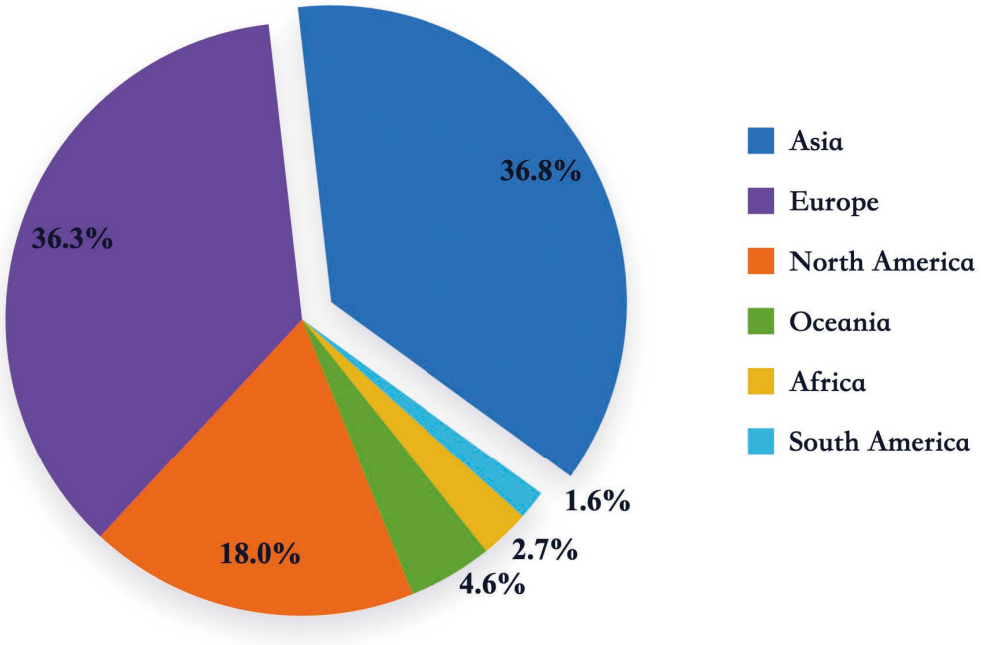


Figure 3-1 Distribution by country and region

(2) Cross–institutional Collaboration

As shown in Figures 3-2 and 3-3, the shares of publications by globally mobile top scientists listing affiliations with academic institutions, medical institutions, and enterprises are 99.1%, 23.3%, and 7.2%, respectively. More than one quarter of top scientists have publication records with multiple institutional affiliations, indicating clear cross-institutional collaboration. Of these, 19.8% involve "academic institution + medical institution" affiliations, and 4.0% involve "academic institution + enterprise" affiliations.①

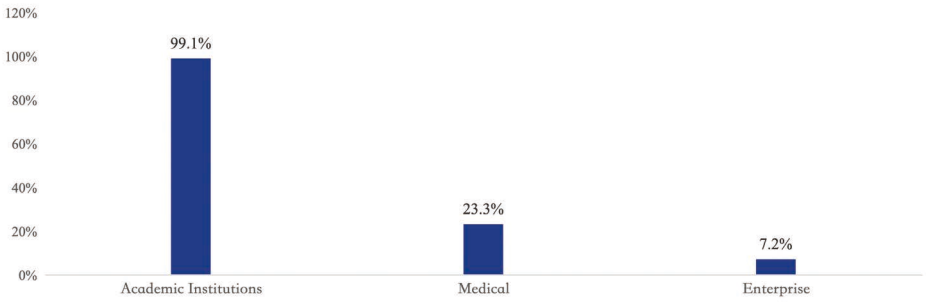


Figure 3-2 Distribution of publication affiliation types

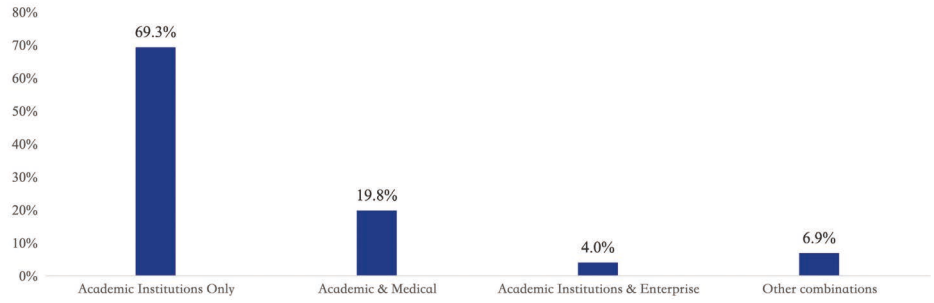


Figure 3-3 Cross-institutional collaboration

① Note: The same top scientist may sign publications under different institutional identities.

(3) Career Age Distribution

Globally mobile top scientists have an average career age of 19.9 years. A total of 82.8% of international mobility occurs within the first 30 years of a research career, with nearly half (47.5%) concentrated in years 11 to 20 (see Figure 3-4). If the average doctoral graduation age of 31 is used as a reference, then top scientists most frequently participate in international mobility and collaboration between the ages of 42 and 51.①

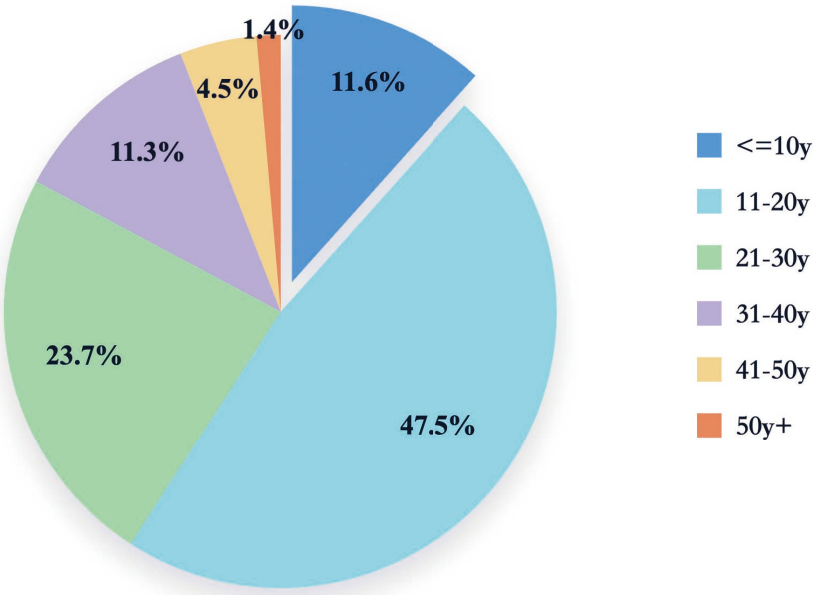


Figure 3-4 Career age distribution

① Source: National Center for Science and Engineering Statistics, *Doctorate Recipients from U.S. Universities: 2023*, NSF 25-300 (Alexandria, VA: National Science Foundation, 2024), table 3-7.

(4) Disciplinary Activity

As shown in Figure 3-5, top scientists in materials science, chemistry, and computer science show relatively high levels of activity in international mobility and collaboration.①



Figure 3-5 Disciplinary activity

① Note: "Disciplinary activity" is calculated as the ratio of the observed frequency of a discipline in the sample to the expected frequency of that discipline. A higher ratio indicates a higher level of activity in the discipline.

(5) Research Performance

Globally mobile top scientists have published an average of about 189 papers over their careers, and their average career h-index is 40.[①] Table 3-1 shows that, compared with 2024, the average number of publications in 2025 remained broadly stable, while the number of publications in the top 5% journals by impact increased, reflecting the positive role of international mobility and collaboration in research performance.[②]

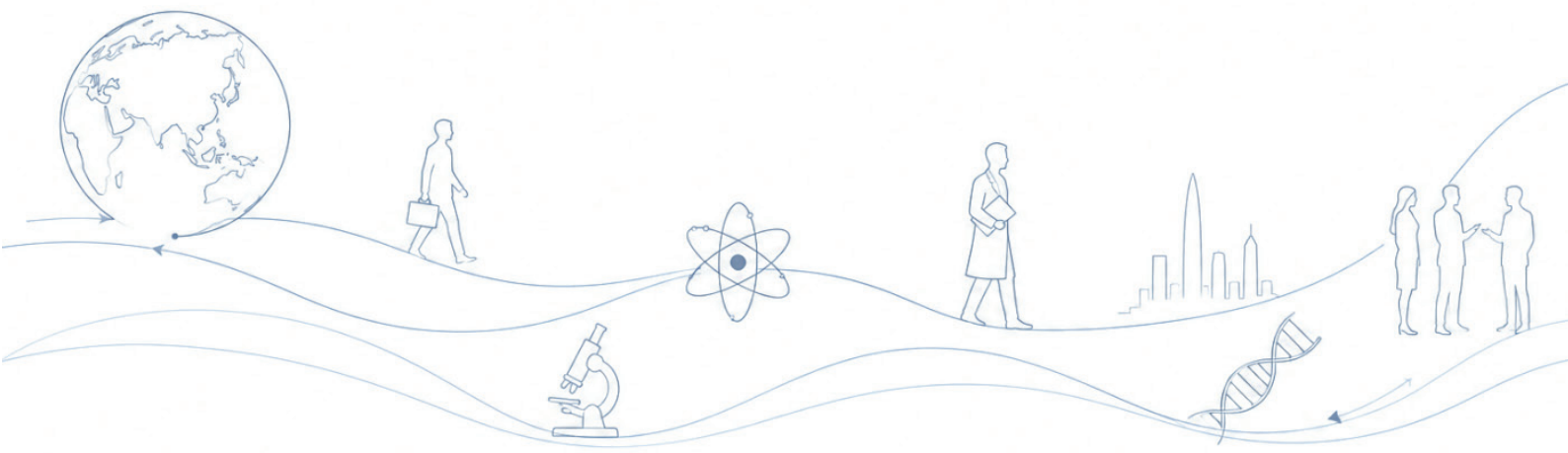
Table 3-1 Research performance of mobile top scientists, 2024 and 2025

Indicator	2024	2025	Comparison
Average number of publications	15.37	15.38	Broadly stable
Publications in top 5% journals by impact	96,055	97,406	Increased

① Note: The h-index, or Hirsch index, is a quantitative indicator used to assess both the volume and impact of a researcher's academic output.

② Note: Publications in top 5% journals by impact refer to the number of papers published by researchers in journals ranked in the top 5% by CiteScore percentile within their fields.

IV. Global Mobility and Collaboration Trends among Top Scientists



(1) Intercontinental and Intracontinental Mobility

Intercontinental mobility has become the main form of international mobility among top scientists. From 2024 to 2025, the intercontinental mobility volume of global top scientists (6,984 persons) was higher than the intracontinental mobility volume (4,447 persons). Asia, Europe, and North America are the main regions for intercontinental mobility and collaboration among top scientists; mobility among these three continents accounts for 73.7% of total intercontinental mobility.

Asia, Europe, and North America all record high inflow volumes (Asia: 2,158 persons; Europe: 2,057 persons; North America: 1,901 persons) and outflow volumes (Europe: 2,056 persons; Asia: 2,018 persons; North America: 1,908 persons). Inflows and outflows across continents are broadly balanced, reflecting the relative balance of intercontinental research collaboration.

For intracontinental mobility, as shown in Figure 4-1, Europe (2,072 persons) and Asia (2,014 persons) together account for 91.9% of the total intracontinental mobility volume, exceeding North America (283 persons), Africa (34 persons), Oceania (25 persons), and South America (19 persons).

Table 4-1 Matrix of intercontinental and intracontinental mobility volumes (unit: persons)

Outflow\Inflow Continent	Asia	Europe	North America	South America	Oceania	Africa	Outflow Volume
Asia	**2,014**	852	847	20	198	101	2,018
Europe	884	**2,072**	835	76	173	88	2,056
North America	886	842	**283**	53	85	42	1,908
South America	20	88	51	**19**	6	1	166
Oceania	228	178	118	3	**25**	9	536
Africa	140	97	50	2	11	**34**	300
Inflow Volume	2,158	2,057	1,901	154	473	241	6,984

Note: Bold numbers indicate intracontinental mobility volume.

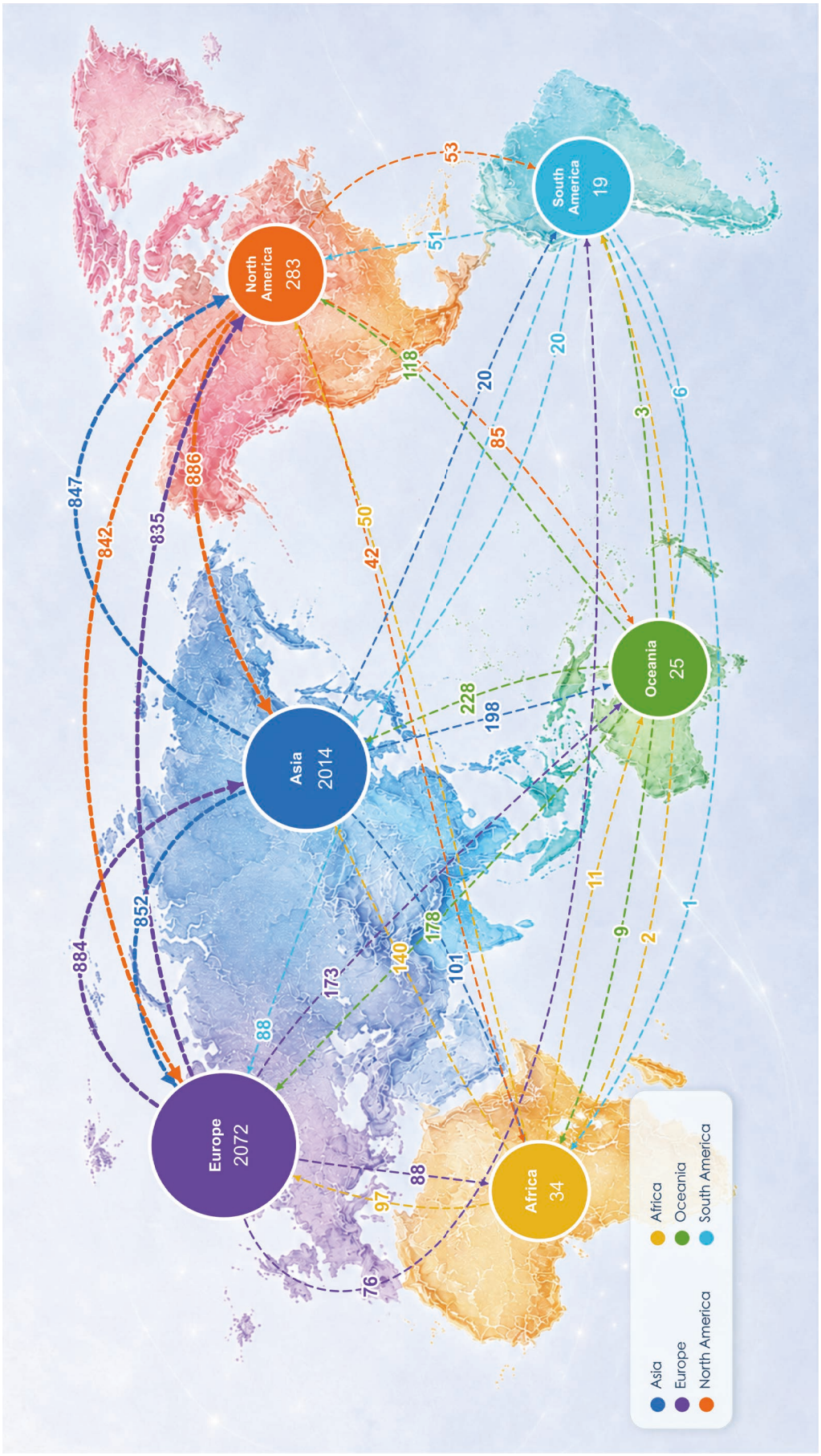


Figure 4-1 Intercontinental and intracontinental mobility and collaboration among top scientists

(2) Countries and Regions

The distribution of mobility and collaboration among global top scientists is concentrated at the country and region level. Table 4-2 shows that the combined mobility volume of the major countries and regions is around 22,000 persons, accounting for more than 90% of total international mobility. The top five countries and regions account for 47.9% of the mobility volume among the top 50 countries and regions.

Table 4-2 International research collaboration activity of top scientists in major countries and regions

Country/Region	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
United States	3,421	1,741	1,680
Chinese mainland	2,579	1,381	1,198
United Kingdom	1,891	939	952
Germany	1,132	552	580
Australia	965	455	510
Canada	889	413	476
Italy	673	340	333
France	624	324	300
Switzerland	540	250	290
Netherlands	534	255	279
Spain	520	274	246
India	492	251	241
Singapore	467	222	245
South Korea	416	198	218
Japan	367	174	193
Saudi Arabia	344	184	160
Sweden	318	156	162
Belgium	303	139	164
Pakistan	278	123	155
Denmark	271	137	134
Malaysia	248	110	138
Hong Kong, China	210	121	89
Iran	203	84	119
Austria	197	104	93
South Africa	187	95	92
United Arab Emirates	186	112	74
Brazil	180	84	96
Ireland	171	81	90
Norway	171	87	84

continued

Country/Region	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
Finland	161	81	80
Egypt	153	57	96
Poland	141	73	68
Türkiye	136	65	71
Portugal	133	69	64
Russia	120	49	71
Israel	118	60	58
Taiwan, China	111	55	56
Greece	107	57	50
Thailand	101	50	51
Bangladesh	95	43	52
Czechia	92	54	38
New Zealand	89	41	48
Vietnam	78	38	40
Indonesia	68	37	31
Chile	68	29	39
Jordan	64	38	26
Nigeria	62	27	35
Qatar	61	28	33
Lebanon	54	26	28
Hungary	53	29	24

By total mobility volume, the United States (3,421 persons), the Chinese mainland (2,579 persons), the United Kingdom (1,891 persons), Germany (1,132 persons), Australia (965 persons), Canada (889 persons), Italy (673 persons), France (624 persons), Switzerland (540 persons), and the Netherlands (534 persons) stand out. The countries and regions with the largest inflow volumes are, in order, the United States, the Chinese mainland, the United Kingdom, Germany, Australia, Canada, Italy, France, Spain, and the Netherlands. Those with the largest outflow volumes are, in order, the United States, the Chinese mainland, the United Kingdom, Germany, Australia, Canada, Italy, France, Switzerland, and the Netherlands. These countries and regions are both important initiators of international research collaboration and major contributors to it.

International research collaboration between the Chinese mainland and the United States is particularly active, reflecting a strong willingness to collaborate (see Figure 4-2). In addition, the United Kingdom, Canada, Singapore, and other countries have also established relatively well-developed channels of exchange and collaboration with the United States and the Chinese mainland.

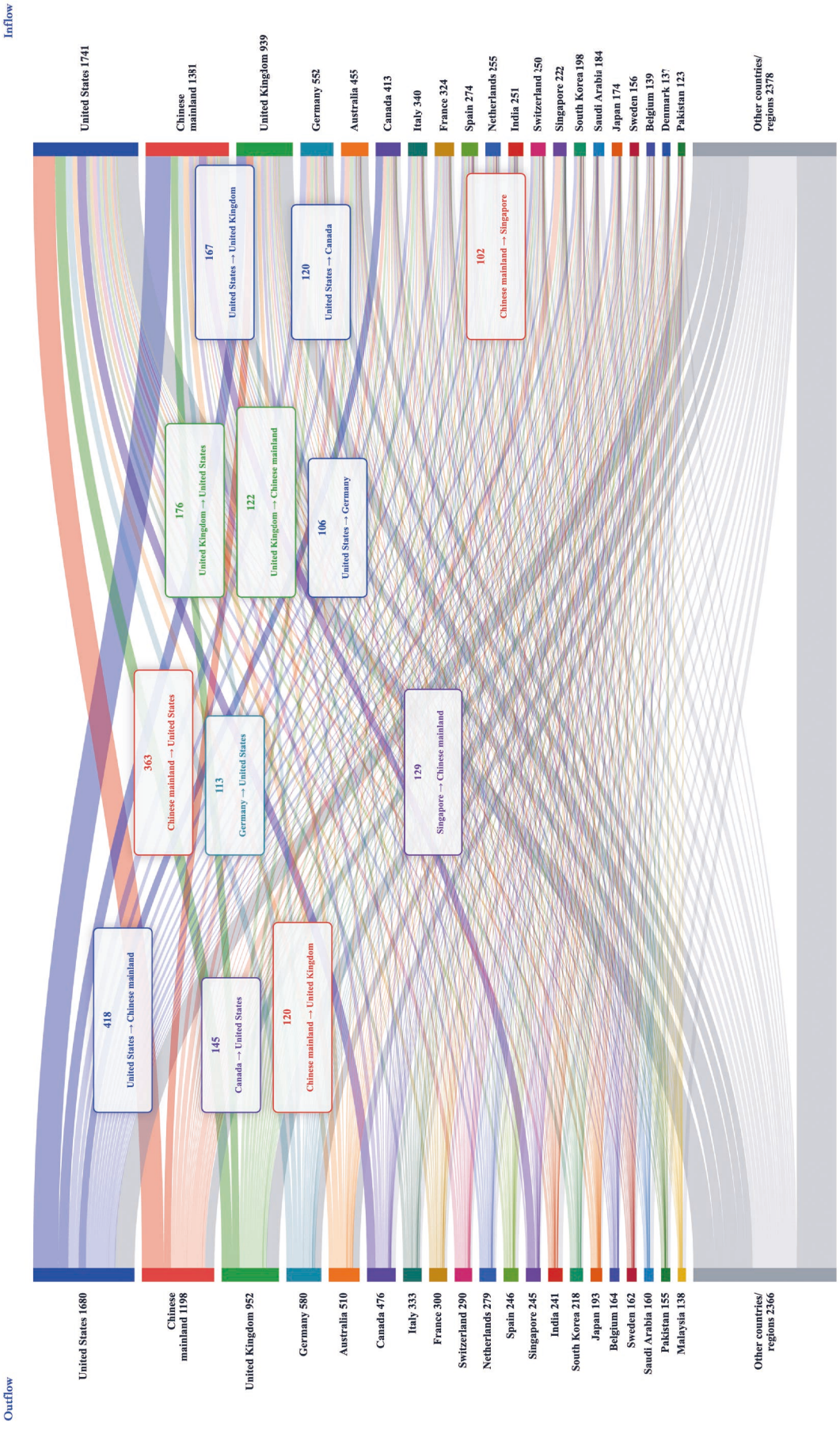


Figure 4-2 Exchanges and collaboration among top scientists across countries and regions

(3) Cities

The mobility of global top scientists is closely linked to research collaboration among international cities. Table 4-3 shows that the top 50 cities have a combined mobility volume of 7,131 persons, accounting for 35.1% of total international intercity mobility. Compared with the high concentration observed at the country level, international mobility and collaboration among top scientists across cities are not limited to a small number of central cities, but involve a broader and more diverse network of connections.

Specifically, London (573 persons), Beijing (450 persons), Singapore (439 persons), Boston (261 persons), Shanghai (231 persons), New York (227 persons), Melbourne (219 persons), Seoul (214 persons), Toronto (205 persons), and Hong Kong (198 persons) record notable mobility volumes, indicating high levels of international research collaboration activity.

Chinese cities are more active in global research collaboration. Among the top 50 cities by mobility volume, 10 are Chinese cities, with a combined mobility volume of 1,681 persons, accounting for 23.6% of the total mobility volume of the top 50 cities. In terms of international research collaboration activity among cities (see Figure 4-3), exchanges and collaboration between Mountain View (Silicon Valley) and London are the most frequent.

Table 4-3 International research collaboration activity of top scientists in major cities

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
London	573	285	288
Beijing	450	228	222
Singapore	439	208	231
Boston	261	132	129
Shanghai	231	122	109
New York	227	118	109
Melbourne	219	110	109
Seoul	214	104	110
Toronto	205	104	101
Hong Kong	198	115	83
Sydney	192	94	98
Paris	176	90	86
Zurich	155	64	91
Cambridge	153	72	81
Nanjing	153	91	62

continued

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
Oxford	135	68	67
Hangzhou	129	71	58
Guangzhou	124	62	62
Brisbane	122	54	68
Montreal	114	57	57
Munich	111	57	54
Wuhan	111	58	53
Stockholm	108	57	51
Vienna	107	55	52
Shenzhen	105	55	50
Berlin	104	51	53
Barcelona	104	51	53
Madrid	100	52	48
Amsterdam	97	48	49
Stanford	94	52	42
Dublin	93	48	45
Milan	92	47	45
Chengdu	90	51	39
Xi’an	90	51	39
Tokyo	90	38	52
Copenhagen	90	45	45
Leuven	88	41	47
Tehran	86	33	53
Riyadh	85	44	41
Edmonton	84	18	66
Houston	81	50	31
Los Angeles	81	43	38
Rome	79	43	36
Geneva	77	42	35
Lausanne	77	33	44
Abu Dhabi	73	45	28

continued

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
Vancouver	69	36	33
Baltimore	66	34	32
Edinburgh	65	35	30
Manchester	64	32	32

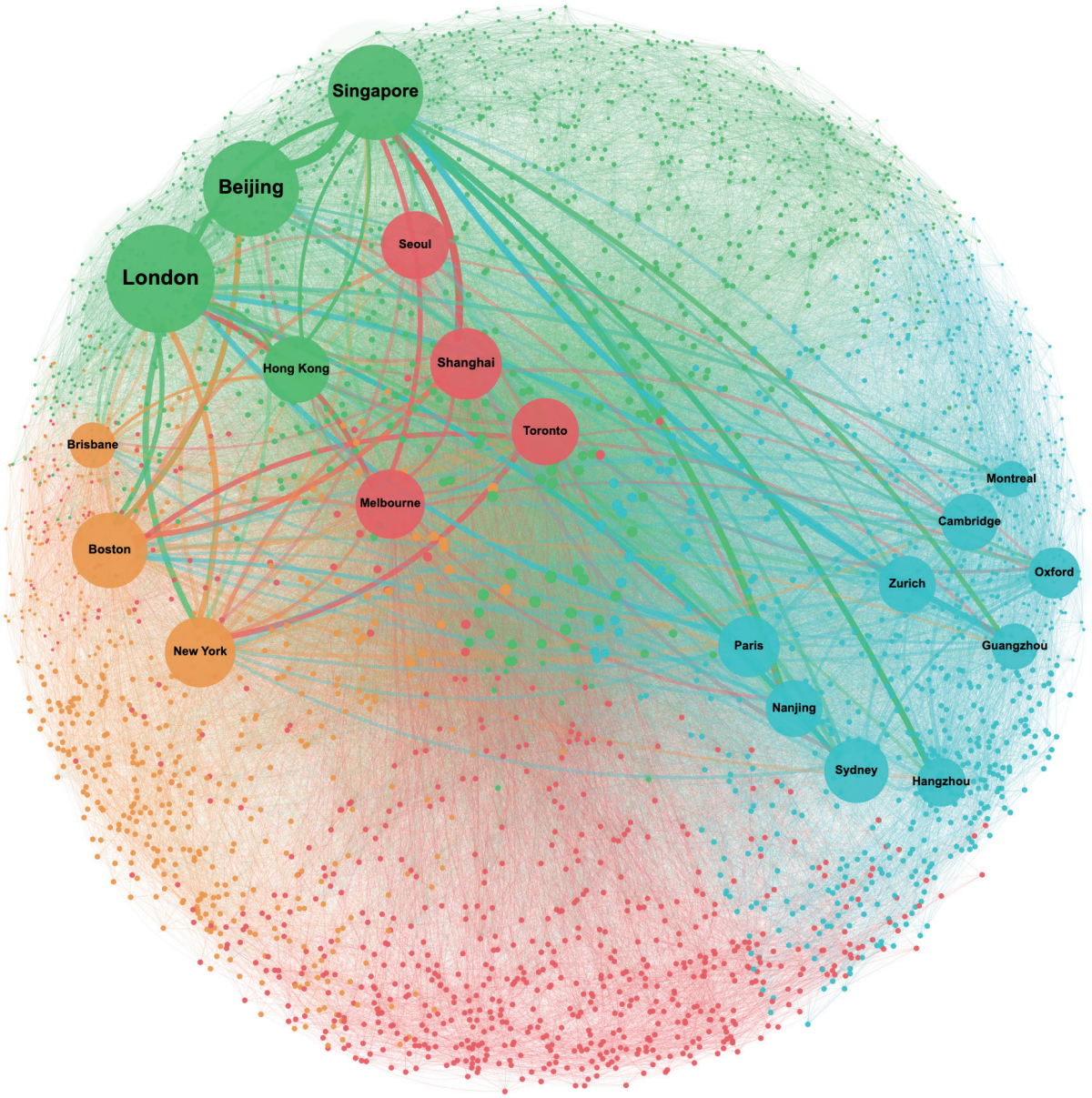


Figure 4-3 Intercity mobility and collaboration among top scientists

(4) Key Disciplines

The report identifies and analyzes the international mobility and collaboration of top scientists in basic sciences, computer science and biomedical sciences.

1. Basic Sciences

1.1 Intercontinental and Intracontinental Mobility

As shown in Table 4-4, from 2024 to 2025, the intercontinental mobility volume of top scientists in basic sciences worldwide (528 persons) was higher than the intracontinental mobility volume (344 persons). Mobility among North America, Europe, and Asia accounted for about 85.8% of global intercontinental mobility in this field.

By inflow volume, Asia (208 persons), North America (169 persons), and Europe (121 persons) rank relatively high. By outflow volume, Europe (179 persons), Asia (164 persons), and North America (140 persons) rank relatively high.

In terms of intracontinental mobility, Asia (233 persons) accounts for nearly 70% of the global intracontinental mobility volume in this field, indicating a higher level of research collaboration activity (see Figure 4-4).

Table 4-4 Matrix of intercontinental and intracontinental international research collaboration activity in basic sciences (unit: persons)

Outflow\Inflow Continent	Asia	Europe	North America	South America	Oceania	Africa	Outflow volume
Asia	**233**	73	82	0	0	9	164
Europe	82	**98**	82	0	12	3	179
North America	97	37	**10**	2	3	1	140
South America	1	4	2	**2**	0	0	7
Oceania	17	4	2	0	**0**	0	23
Africa	11	3	1	0	0	**1**	15
Inflow Volume	208	121	169	2	15	13	528

Note: Bold numbers indicate intracontinental mobility volume.

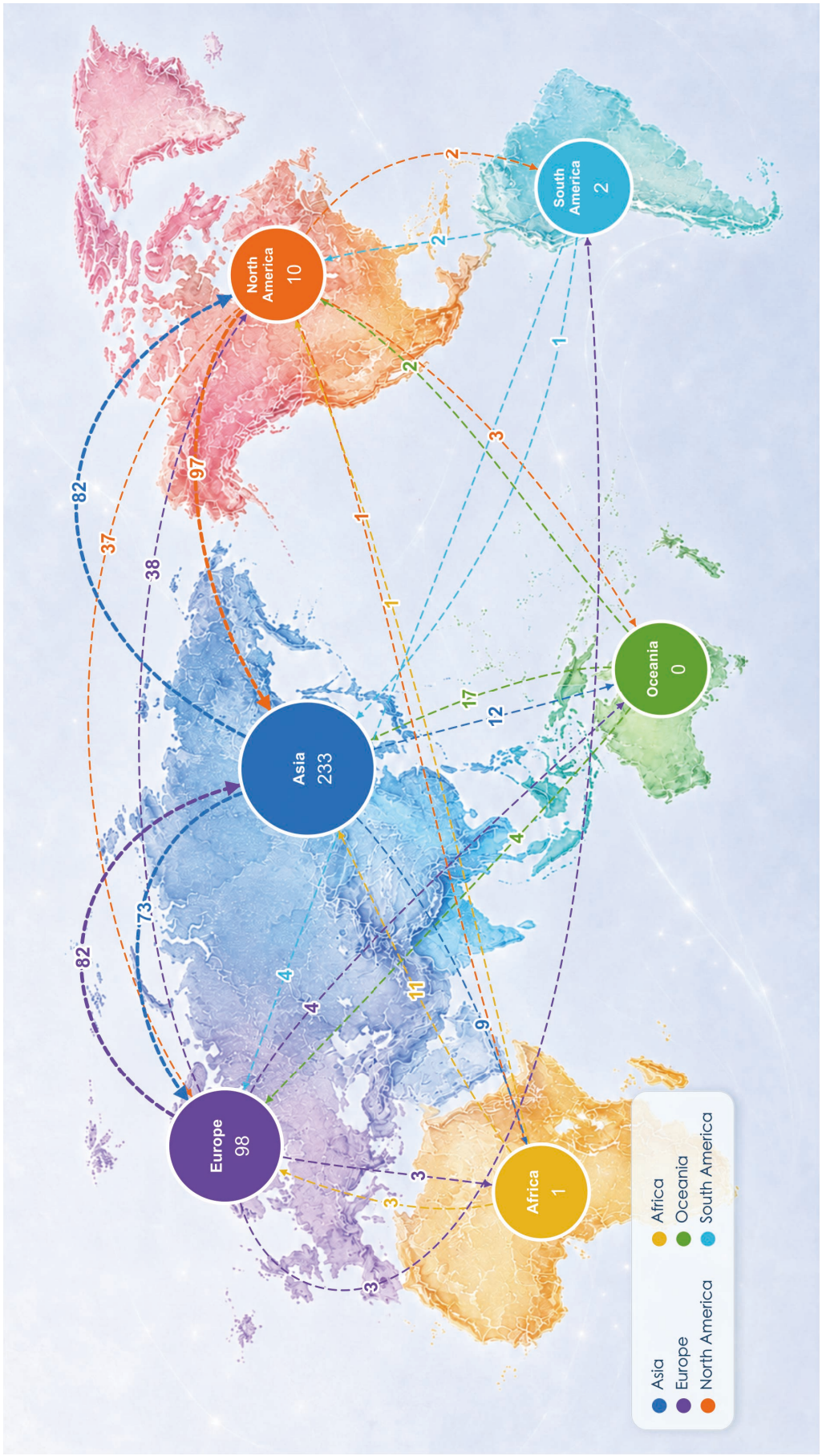


Figure 4-4 Intercontinental and intracontinental mobility and collaboration among top scientists in basic sciences

1.2 Cities

Table 4-5 shows the international research collaboration activity of top scientists in basic sciences across major cities. Singapore (65 persons), Beijing (56 persons), Shanghai (34 persons), and Hong Kong (25 persons) are relatively active in international mobility and collaboration in this field. Over the past two years, exchanges and collaboration between Singapore and Chinese cities have been relatively intensive (see Figure 4-5).

Table 4-5 International research collaboration activity of top scientists in basic sciences in major cities

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
Singapore	65	30	35
Beijing	56	29	27
Shanghai	34	20	14
Hong Kong	25	13	12
Seoul	21	12	9
London	19	11	8
Hangzhou	18	9	9
Tianjin	17	10	7
Cambridge	17	8	9
Nanjing	16	11	5
Toronto	16	6	10
Guangzhou	14	7	7
Thuwal	13	7	6
Berkeley	13	6	7
Shenzhen	12	6	6
Wuhan	12	6	6
Hefei	11	8	3
Evanston	11	7	4
New York	11	4	7
Stanford	10	6	4
Boston	10	6	4
Chengdu	10	6	4
Lausanne	10	4	6
Zurich	10	4	6
Xi'an	9	4	5
Brisbane	9	4	5

continued

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
Sydney	9	3	6
Qingdao	8	5	3
Los Angeles	8	4	4
Paris	8	4	4
Tokyo	8	4	4
Tsukuba	8	2	6

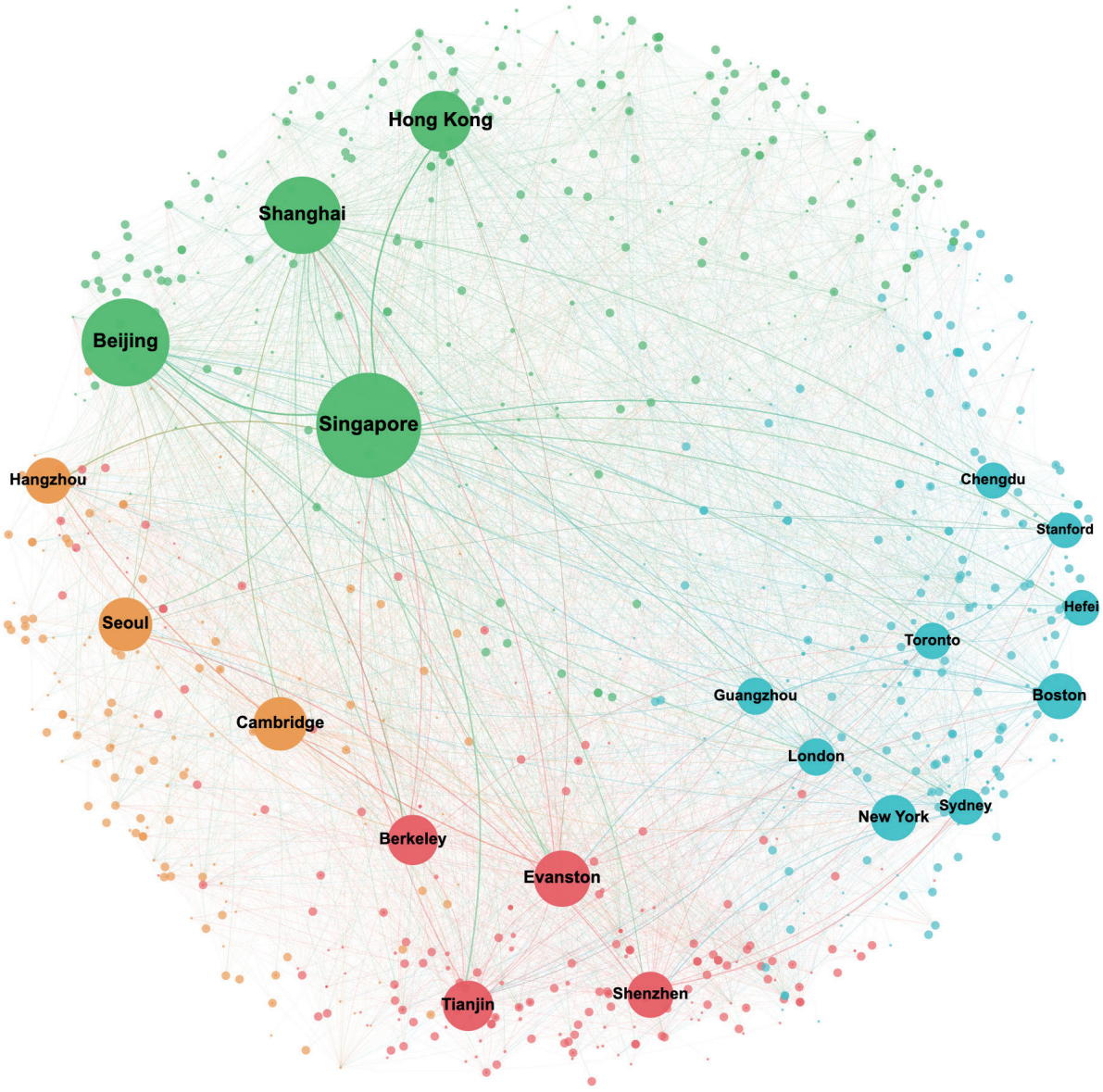


Figure 4-5 Intercity mobility and collaboration among top scientists in basic sciences

2. Computer Science

2.1 Intercontinental and Intracontinental Mobility

From 2024 to 2025, the intercontinental mobility volume of top computer scientists worldwide (601 persons) was higher than the intracontinental mobility volume (413 persons). Mobility among Asia, Europe, and North America accounted for 83.5% of global intercontinental mobility in this field, making a major contribution to global research collaboration in computer science.

By inflow volume, Asia (235 persons), Europe (175 persons), and North America (145 persons) record relatively high volumes. By outflow volume, Asia (216 persons), Europe (170 persons), and North America (162 persons) record relatively high volumes. Inflows and outflows of top computer scientists across continents are broadly balanced, reflecting the relative balance of intercontinental research collaboration.

In terms of intracontinental mobility, Asia (284 persons) and Europe (105 persons) record relatively large volumes, indicating a higher level of research collaboration activity (see Figure 4-6).

Table 4-6 Matrix of intercontinental and intracontinental international research collaboration activity in computer science (unit: persons)

Outflow\Inflow Continent	Asia	Europe	North America	South America	Oceania	Africa	Outflow Volume
Asia	**284**	100	85	2	23	6	216
Europe	102	**105**	57	3	6	2	170
North America	101	57	**16**	2	2	0	162
South America	2	6	0	**3**	0	0	8
Oceania	21	7	1	0	**2**	0	29
Africa	9	5	2	0	0	**3**	16
Inflow Volume	235	175	145	7	31	8	601

Note: Bold numbers indicate intracontinental mobility and collaboration volume.

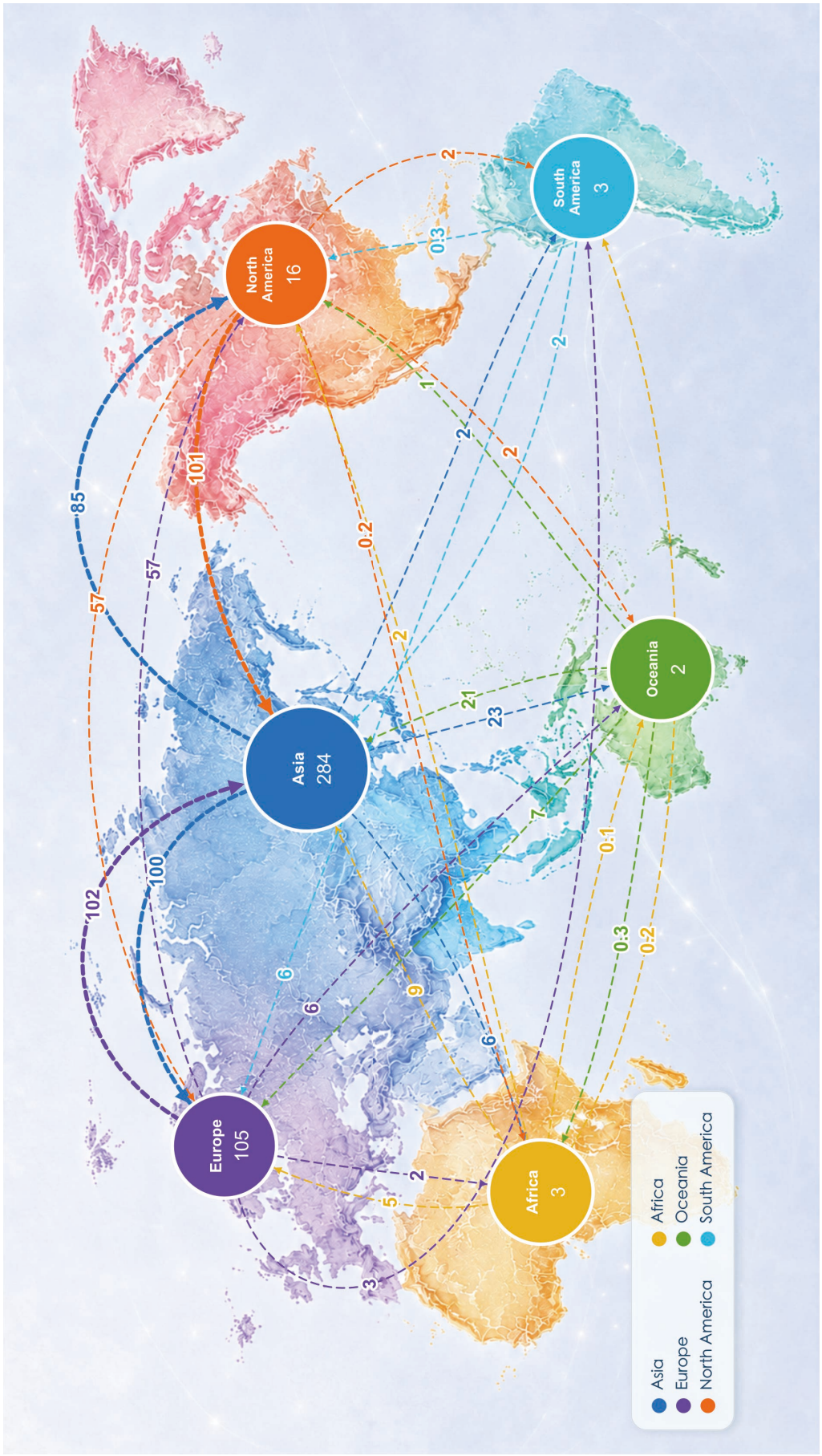


Figure 4-6 Intercontinental and intracontinental mobility and collaboration among top scientists in computer science

2.2 Cities

Table 4-7 shows the international research collaboration activity of top scientists in computer science across major cities. Singapore (76 persons), London (72 persons), Beijing (57 persons), Mountain View (35 persons), Hong Kong (30 persons), Shanghai (26 persons), Zurich (24 persons), Nanjing (23 persons), Seoul (23 persons), and Hangzhou (21 persons) are active in international mobility and collaboration in this field. Over the past two years, exchanges and collaboration between Mountain View (Silicon Valley) and London have been relatively intensive (see Figure 4-7).

Table 4-7 International research collaboration activity of top scientists in computer science in major cities

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
Singapore	76	30	46
London	72	40	32
Beijing	57	26	31
Mountain View	35	10	25
Hong Kong	30	18	12
Shanghai	26	14	12
Zurich	24	7	17
Nanjing	23	17	6
Seoul	23	11	12
Hangzhou	21	11	10
Xi'an	19	13	6
Sydney	18	10	8
Chengdu	17	11	6
Toronto	17	10	7
Dublin	16	9	7
Abu Dhabi	16	8	8
Shenzhen	15	8	7
Wuhan	15	8	7
Guangzhou	14	7	7
Montreal	13	9	4
New York	13	7	6
Boston	12	4	8
Thuwal	11	4	7
Redmond	11	4	7

continued

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
Aalborg	11	3	8
Hefei	10	5	5
Cambridge	10	6	4
Munich	10	3	7
Chongqing	8	5	3
Harbin	8	4	4

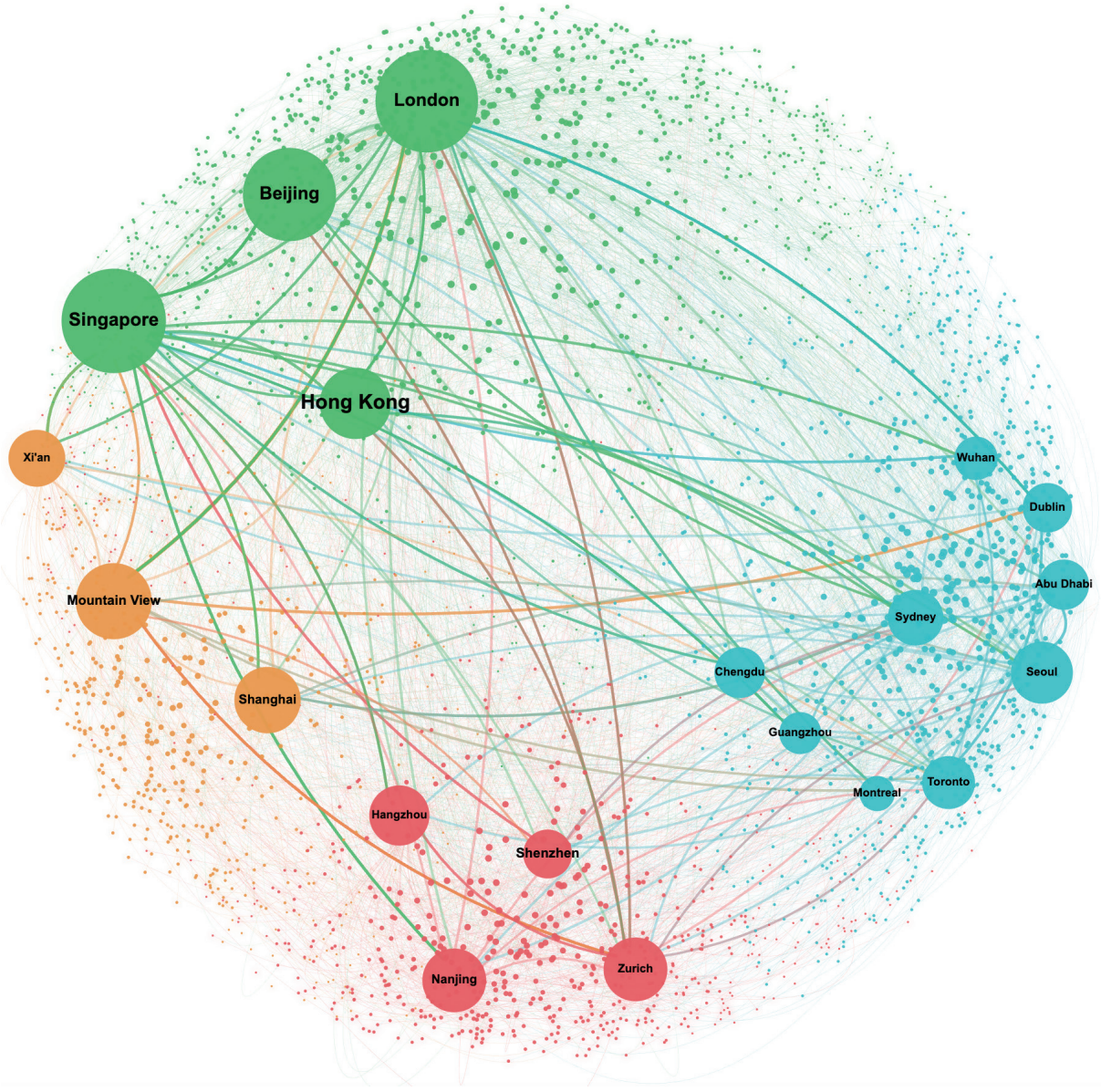


Figure 4-7 Intercity mobility and collaboration among top scientists in computer science

3. Biomedical Sciences

3.1 Intercontinental and Intracontinental Mobility

From 2024 to 2025, the intercontinental mobility volume of top scientists in biomedical sciences worldwide (1,870 persons) was higher than the intracontinental mobility volume (1,042 persons). Mobility among North America, Europe, and Asia accounted for about 74.1% of global intercontinental mobility in this field, making an important contribution to global research collaboration in biomedical sciences.

By inflow volume, North America (647 persons), Europe (625 persons), and Asia (359 persons) record relatively high volumes. By outflow volume, Europe (625 persons), North America (618 persons), and Asia (371 persons) record relatively high volumes. Inflows and outflows of scientists in biomedical sciences across continents are broadly balanced, reflecting the relative balance of intercontinental research collaboration.

In terms of intracontinental mobility, Europe (746 persons) accounts for more than 70% of the global intracontinental mobility volume in this field, higher than all other continents (see Figure 4-8).

Table 4-8 Matrix of intercontinental and intracontinental international research collaboration activity in biomedical sciences (unit: persons)

Outflow\Inflow Continent	Asia	Europe	North America	South America	Oceania	Africa	Outflow Volume
Asia	**145**	135	192	4	28	12	371
Europe	145	**746**	370	23	69	18	625
North America	166	378	**135**	21	39	14	618
South America	3	22	23	**4**	2	0	50
Oceania	31	65	51	2	**9**	3	152
Africa	14	25	11	1	3	**3**	54
Inflow Volume	359	625	647	51	141	47	1,870

Note: Bold numbers indicate intracontinental mobility volume.

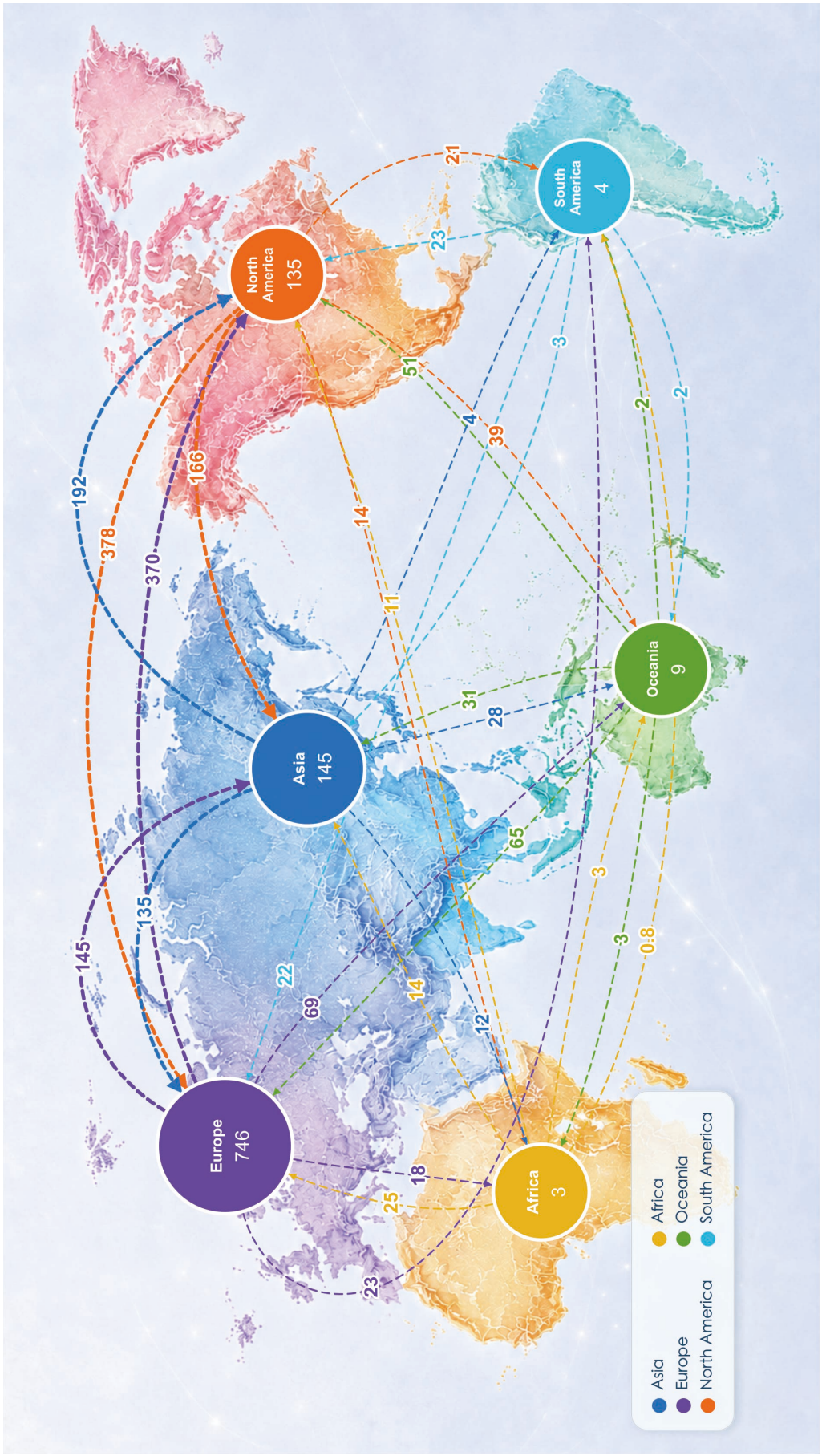


Figure 4-8 Intercontinental and intracontinental mobility and collaboration among top scientists in biomedical sciences

3.2 Cities

Table 4-9 shows the international research collaboration activity of top scientists in biomedical sciences across major cities. Cities in the United Kingdom and the United States are more active in the international mobility and collaboration of top scientists in biomedical sciences. London, Boston, and New York record mobility volumes of 209, 149, and 112 persons, respectively. As shown in Figure 4-9, exchanges and collaboration between US cities and other major cities have been more active over the past two years.

Table 4-9 International research collaboration activity of top scientists in biomedical sciences in major cities

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
London	209	108	101
Boston	149	82	67
New York	112	57	55
Toronto	98	53	45
Paris	85	42	43
Melbourne	78	39	39
Singapore	63	40	23
Sydney	63	33	30
Milan	55	31	24
Madrid	48	26	22
Oxford	47	23	24
Amsterdam	47	21	26
Edmonton	45	4	41
Barcelona	43	19	24
Beijing	42	20	22
Cambridge	42	21	21
Montreal	42	18	24
Vienna	40	20	20
Houston	39	23	16
Stockholm	38	21	17
Zurich	38	20	18
Seoul	38	17	21
Munich	37	19	18
Shanghai	35	13	22
Leuven	35	20	15

continued

City	Total Mobility Volume (persons)	Inflow Volume (persons)	Outflow Volume (persons)
Copenhagen	35	18	17
Dublin	35	17	18
Los Angeles	34	20	14
Berlin	34	18	16
Baltimore	34	16	18

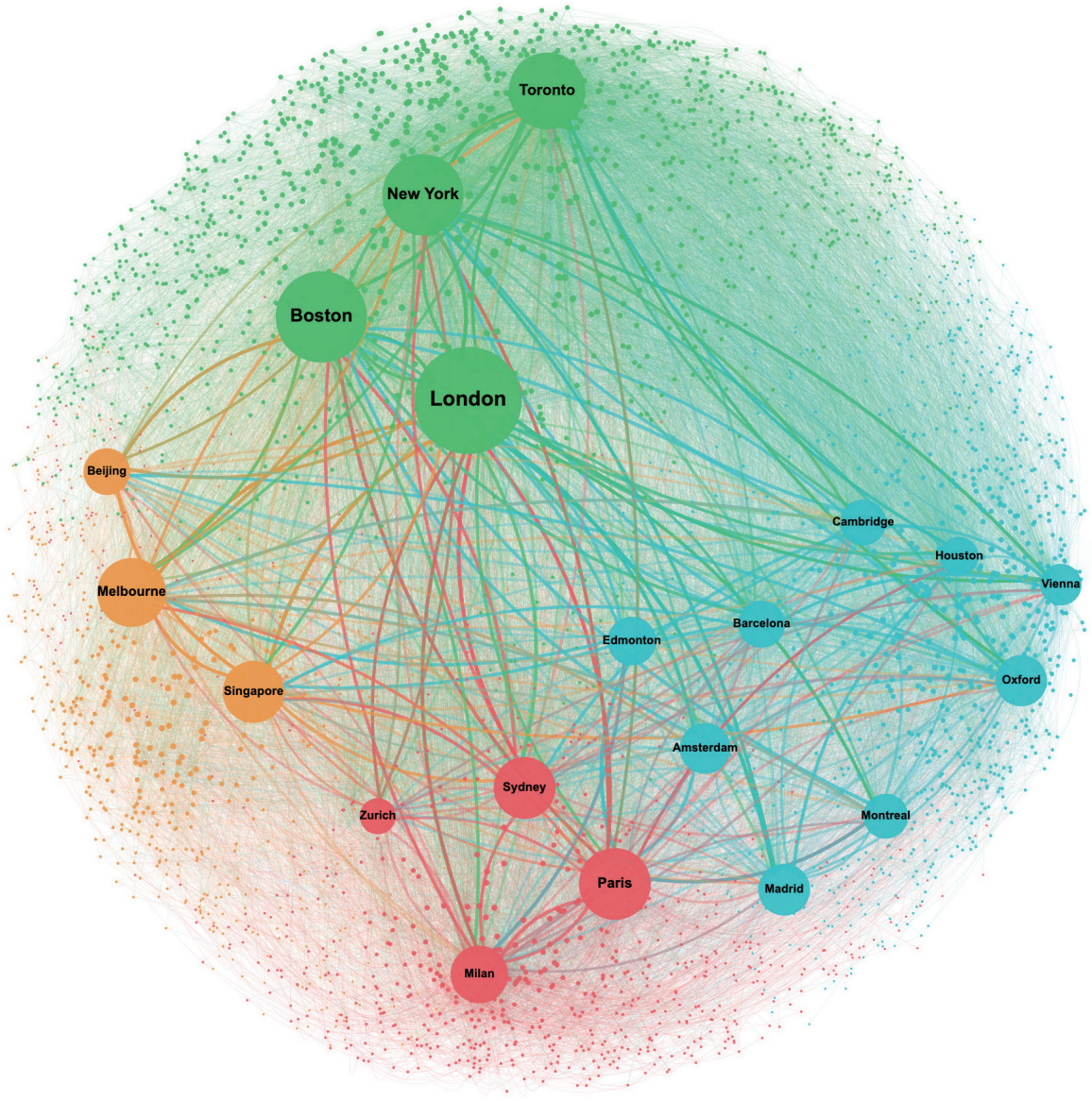


Figure 4-9 Intercity mobility and collaboration among top scientists in biomedical sciences

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