

第 20 回アジア学術会議報告

令和3年5月27日
日本学術会議

アジア学術会議 (Science Council of Asia: SCA) は、アジア地域における学術的な協力を促進するため、2000 年 (平成 12 年) に設立された国際会議であり、日本学術会議に事務局が設置されている。アジア各国がより一層積極的に参加・貢献するために、加盟各国が毎年の会合を持ち回りで開催しており、第 20 回会議は、以下の概要にて開催された。

1. 日時

令和3年5月13日(木)～15日(土)(3日間)

2. 開催形式

ハイブリッド形式 (オンライン及び現地 (中国・広州)) ホストは China Association for Science and Technology (CAST)。日本学術会議からはオンライン参加。

3. 参加国・地域及び参加者数

21 国・地域より約 500 名 (現地参加約 350 名、オンライン約 150 名)

参加国・地域内訳／順不同: バングラデシュ、カンボジア、中国、台湾、インド、インドネシア、日本、韓国、マレーシア、モンゴル、ミャンマー、ネパール、パキスタン、フィリピン、シンガポール、スリランカ、タイ、ベトナム、アメリカ、フランス、スウェーデン

4. テーマ

The Age of New Materials: Innovation for Sustainable Society

(ニューマテリアルの時代: 持続可能な社会のためのイノベーション^(仮訳))

5. 主な日程

5月13日(木)	開会式、基調講演、パラレルセッション、ポスターセッション、理事会等
5月14日(金)	基調講演、パラレルセッション、ポスターセッション、総会、閉会式等

5月15日(土)

スタディーツアー(現地参加者のみ)

6. 基調講演(日本学術会議からの推薦者)

1) K Sudesh KUMAR(Professor of Universiti Sains Malaysia)

Bio-Based and Biodegradable Plastics for A Sustainable Future(持続可能な未来のためのバイオベース生分解性プラスチック^(仮訳))

2) 白波瀬佐和子(日本学術会議会員)

Social Inclusion to Achieve the Sustainable Society, Focusing on the Super-Aged Society, Japan(持続可能な社会を達成するための社会的包摂を考える:超高齢社会・日本の事例を通して)

7. パラレルセッション

1) Sustainability, Social Diversity and Gender Equality

2) Green and Intelligent Materials

3) Functional Materials for Informatics

4) Smart Transformation in Agriculture and Local Community

5) New Frontiers for Materials Design

6) Advanced Energy Materials

日本学術会議会員・連携会員等10名がオンラインにて参加・プレゼンテーションを実施

8. アジア学術会議宣言文

アジア学術会議開催時に例年宣言文を発出しており、第20回会議では「ポストコロナ時代の包摂的で持続可能な社会のための革新:ニューマテリアルの時代に向けて^(仮訳)」といったタイトルの宣言文が採択された。

以上



Science Council of Asia

The 20th Science Council of Asia (SCA)

The Age of New Materials: Innovation for Sustainable Society

Declaration

Innovation for Inclusive and Sustainable Society in the Post-COVID 19 Era:

Towards the Age of New Materials

第 20 回アジア学術会議 (SCA)

ニューマテリアルの時代：持続可能な社会のためのイノベーション

宣言文 (概要)

ポストコロナ時代の包摂的で持続可能な社会のための革新：
ニューマテリアルの時代に向けて

(中略)

第 20 回アジア学術会議は、調和の取れた持続可能な社会に対する重大なニーズを認識すると共に、本会議のテーマに基づき、以下のように宣言する。

1. マテリアル科学における新たな破壊的イノベーションにより注目し、共同で努力する必要性を認識する
2. マテリアル、情報、エネルギー、生物生態、環境の相互作用が、社会の持続可能性の決定要素であることを認識する
3. 社会の多様性、ジェンダー平等を重視し、アジアの豊かな文化をよりよく保存しつつ、地域と世界の経済成長のために科学の進歩を促進する
4. アジアの影響力を高めるための手段としての科学協力を推進する

望ましいアクション

- 国連の持続可能な開発目標 (SDGs) に沿って、短期的および長期的な戦略的目標と目的を改善し、特定の課題について (一時的な) コワーキンググループを形成するためのガイドラインやロードマップを取り入れる。
- 人材育成強化、研究および協力の優先的な方向性の設定、共同プロジェクトの実施、共同出版の奨励、具体的な目標とタイムラインの設定、協力促進のための専門家データベースの構築、SCA カンファレンス中や別個にチュートリアルや研修コースを設けるなど、SCA のアカデミー間やそれを越えた国際的・地域的な協力関係を構築する。
- コロナ感染症のような危機的状況下、科学において、バーチャルフォーラム、オンラインミーティングスペース、オンラインディスカッションなど、合理的なコミュニケーション方法を発展させる。

以上



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40

The 20th Science Council of Asia (SCA)
"The Age of New Materials: Innovation for Sustainable Society"

Declaration
Innovation for Inclusive and Sustainable Society in the Post-COVID 19 Era:
Towards the Age of New Materials

On this date of May 14th 2021,

We, delegates of the Science Council of Asia (SCA) Board and General Assembly, and participants of the 20th SCA Conference, affirm that it is essential for all the nations and regions in Asia to put greater efforts on research and innovation for our better life and for a more sustainable planet.

We live in the one world with enormous challenges, the on-going Covid-19 pandemic, the threat of global warming, the ageing society, etc. Politicians, economists, and scientists are searching for solutions along different directions, and we believe that one of the fundamental solutions is to embrace the age of new materials: to discover new materials, to create more functionalities, and to use materials in more energy efficient and environmental friendly ways.

Recalling the theme of the conference and recognizing the critical needs for a harmonious and sustainable society, the 20th SCA conference makes the following declarations:

1. We need to pay more attention to, and make more joint efforts on emerging disruptive innovations in materials sciences

We are witnessing more and more disruptive innovations in materials sciences: materials design based on computation, short loop cost effective materials engineering based on in-situ and in operando characterizations enabled by modern science instrumentation, two dimensional (2D) materials and atomic precision materials engineering, quantum materials etc. They may shape our society in drastic game changes. To accelerate the breakthrough and to make full use of the new innovations, we need more cross-collaboration efforts, more international joint efforts, and more correct forecasts of the needs of people.

2. The interplay of materials, information, energy, biology and environment are decisive for the sustainability of our society

Materials, information, energy and biology are the fundamental social infrastructure to modern civilizations. They have huge impacts on our life and the environment. The materials to be developed should be more harmonious with green, recyclable, naturally degradable, energy effective and respective to the ownership, etc. Higher priority needs to be considered for smart materials including nano-materials, bio-materials, flexible materials, AI, robotics etc. Materials pertinent to data generation and utilization are becoming more and more important. The merging of Bio and Infor Tech (BTIT) holds promises on functionality, versatility and energy efficiency.

41 Everything needs to be designed, engineered and used in environmentally compatible ways for
42 social sustainability.

43

44 3. We highly value social diversity, gender equality and promote science advances for regional
45 and global economic growth with better preservation of Asian culture richness

46 Asian countries and regions possess rich regional cultures and highly diversified societies.
47 Asian countries and regions also face global challenges such as gender equality, ageing society,
48 protectionism, misconduct and misuse of science and technology achievements. SCA is aware of
49 the unintentional adverse effects of science and technology development on the society. SCA
50 strives for influence on the mindsets of policy makers, economists and scientists so that they
51 become vanguard for promotion science advances, to provide solutions for social problems, as well
52 as for protection of social diversity and culture richness.

53

54 4. Promoting scientific collaboration as a means for improving Asian influences

55 Asia is playing an increasingly important role in global economy and politics. To further enhance
56 the influences of Asian countries and regions on the global stage, SCA member academies shall
57 work together, to promote bilateral or multilateral scientific collaborations, organize joint
58 education programs. It is also highly important to create platforms for training, sharing society
59 diversities, culture differences, to help overcome the barriers for such cross- country collaborations.
60 It would be of high value to provide opportunities for overseas training of young scientists, female
61 scientists, and internships for better understandings of people from different countries, so that
62 they become driving forces for the prosperity of countries in Asia in terms of science, technology
63 and social development in the near future.

64

65 Recommended Actions:

66 - SCA recognizes that it is important to refine the strategic goals and objectives of short-term
67 and long-term in line with the United Nation’ s SDGs, incorporate with guidelines or
68 roadmaps to form (temporary) co-working groups on specific issues.

69

70 - Equally important is to develop international and regional cooperation between and beyond
71 the SCA academies in aspects like strengthening capacity building, setting priority directions
72 of research and collaboration, making joint projects, encouraging joint publications, defining
73 concrete objectives and time lines, building database of experts to facilitate collaboration,
74 making tutorial or training courses during SCA conferences or separately etc.

75

76 - It’ s also necessary to develop rational ways of communication, for example, on virtual
77 forum, online meeting space, online discussion, in science under critical condition such as
78 the COVID-19 crisis.

79

80 We, SCA, pledge to promote science and technology advances and to strengthen the scientific
81 communities in Asia for more effective contributions in responding to social needs, and to achieve
82 the United Nation’ s 2030 Agenda for Sustainable Development, which is “to leave no one behind”.
83 We understand that it is a challenging job but worthy to devote ourselves for the benefit of Asian
84 countries and regions, and for the whole world.