Special Session	Outline	Style
S1: **Earth materials science related to igneous processes** **Conveners** Morihisa Hamada mhamada[a]jamstec.go.jp	Recent advances in Earth materials science to decode igneous processes and geodynamics of magmas, such as partial melting of mantle and generation of primary magmas, differentiation of magmas, volcanic eruption, ore formation, contact metamorphism and metasomatism, are remarkable. Most of these studies are based on geochemical analysis and observation of the micro- to nano-structure of mantle xenoliths, volcanic and plutonic rocks, volcanic gases, hot spring waters and so on. The purpose of this special session is to discuss the latest studies and to promote it. We welcome multidisciplinary contributions based on field observations, analyses of natural samples, high P/T experiments and theoretical modelling to better understand igneous processes.	Oral and Poster
S2: Water Rock Interaction **Conveners** Noriyoshi Tsuchiya noriyoshi.tsuchiya.e6[a]tohoku.ac.jp Koicihro Fujimoto koichiro[a]u-gakugei.ac.jp Tetsuo Kawakami kawakami.tetsuo.3e[a]kyoto-u.ac.jp	Topic session "Water – Rock Interaction" involves multidisciplinary research for roles of "fluids" to the Earth Processes, related to metamorphic rocks, volcanic rocks, hydrothermal alteration, ore deposit, hydrothermal experiments, and transport phenomena of fluids. Research methods are also multidisciplinary research methods, such as field survey, experiment, numerical calculation and modeling, will be expected. This topic session also includes geological application such as mineralogical study of radioactive decontamination, nuclear waste geological disposal and carbon dioxide capture and storage and geothermal energy.	Oral and Poster
Regular Session	**Outline**	**Style**
R1: Characterization and description of minerals **Conveners** Koichi Momma k-momma[a]kahaku.go.jp Yasuyuki Banno, y-banno[a]aist.go.jp Masanori Kurosawa kurosawa[a]geol.tsukuba.ac.jp Hiroshi Kitawaki, kitawaki[a]cgl.co.jp	This session focuses on mineral descriptions, characterization, and analytical methods of earth and planetary materials. Descriptions of occurrence, morphology, internal texture, crystal structure, chemistry, fluid inclusion, solid inclusion, crystal imperfections in minerals, studies on gem identification, and studies on development of analytical methods for mineral sciences are welcomed. **Joint Session with The Gemmological Society of Japan.**	Oral and Poster
R2: Crystal structure, crystal chemistry, physical properties of minerals, crystal growth and applied mineralogy **Conveners** Kazuki Komatsu kom[a]eqchem.s.u-tokyo.ac.jp Mariko Nagashima nagashim[a]yamaguchi-u.ac.jp Akira Yoshiasa yoshiasa[a]kumamoto-u.ac.jp	This session covers structural description of natural and synthetic minerals, their growth and dissolution mechanism together with interesting physic-chemical properties. Presentations dealing with advanced analytical techniques for characterizing a variety of mineral structures and their fundamental properties are welcome.	Oral and Poster
R3: High-pressure science and deep Earth's material **Conveners** Takaaki Kawazoe kawazoe[a]hiroshima-u.ac.jp Ryosuke Sinmyo, sinmyo[a]meiji.ac.jp Takeshi Sakai, sakai[a]sci.ehime-u.ac.jp Masayuki Nishi nishimasa[a]ess.sci.osaka-u.ac.jp	It is significantly important to understand the wide range of mineral sciences in the Earth's interior, because dynamics in the Earth's interior must be closely related to not only the evolution of the Earth but also the environment near the Earth' surface. The aim of this session will be to discuss the full range of physical and chemical properties of minerals on the basis of experimental and computational approaches. Targeted materials are not only minerals but also their analogous, amorphous materials and melt.	Oral and Poster
R4: Mineral sciences of the Earth surface **Conveners** Satoshi Utsunomiya utsunomiya.satoshi.998 [a]m.kyushu-u.ac.jp Keisuke Fukushi fukushi[a]staff.kanazawa-u.ac.jp Hiroshi Sakuma SAKUMA.Hiroshi[a]nims.go.jp Jun Kawano j-kawano[a]sci.hokudai.ac.jp Tadashi Yokoyama t-yokoyama[a]hiroshima-u.ac.jp	This session aims to present the latest advances in the mineralogical sciences of the Earth surface. The session will cover physical and chemical characteristics of nanoscale minerals, biomineralization, processes at water-mineral interface, inorganic-organic interactions, and others.	Oral and Poster

R5: Extraterrestrial materials **Conveners** Megumi Matsumoto m_matsumoto[a]tohoku.ac.jp Yusuke Seto, seto.y[a]omu.ac.jp Shogo Tachibana tachi[a]eps.s.u-tokyo.ac.jp	We welcome contributions on mineralogical sciences of extraterrestrial materials such as presolar grains, cosmic dust, meteorites, lunar samples, and return samples.	Oral and Poster
R6: **Plutonic rocks, volcanic rocks and subduction factory** **Conveners** Masao Ban ban[a]sci.kj.yamagata-u.ac.jp Atsushi Kamei kamei-a[a]riko.shimane-u.ac.jp Tsukasa Ohba t-ohba[a]gipc.akita-u.ac.jp Tatsuhiko Kawamoto kawamoto.tatsuhiko[a]shizuoka.ac.jp	This session focuses on studies of plutonic and volcanic rocks. We expect lively discussions on magma genesis, magma emplacement and their relationship with tectonics, from the viewpoint of various disciplines such as petrology, mineralogy, geochemistry, dating, and geology. This session also welcomes studies on subduction factory that produces continental crust.	Oral and Poster
R7: Petrology, Mineralogy and Economic geology **Conveners** Norikatsu Akizawa akizawa[a]aori.u-tokyo.ac.jp Takuya Echigo echigo[a]gipc.akita-u.ac.jp	This session accepts a wide range of petrological, mineralogical, economic geological, and geochemical studies that deal with earth and planetary materials. We expect various discussions about constituent materials of the earth. **Joint Session with SRG (Society of Resource Geology).**	Oral and Poster
R8: Metamorphic rocks and tectonics **Conveners** Shunsuke Endo s-endo[a]riko.shimane-u.ac.jp Fumiko Higashino higashino.fumiko.2m[a]kyoto-u.ac.jp	We call for interdisciplinary contributions dealing with crustal and mantle dynamics at the plate convergent boundaries, including approaches from petrology, structural geology, geochronology, fluid inclusion studies, numerical modeling and isotope geochemistry.	Oral and Poster