

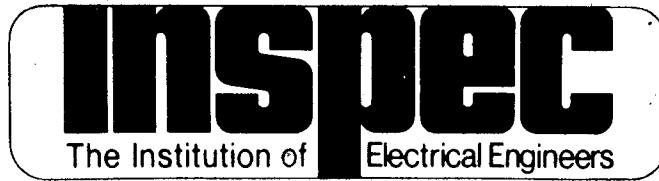


thesaurus

1979

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thesaurus

1979

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INTRODUCTION

The INSPEC Thesaurus, first published in 1973, had been developed and extended in the intervening years and now contains approximately 9000 terms, of which some 5200 are preferred terms and 3800 are cross-reference or 'lead-in' terms.

The Thesaurus is used in indexing all documents added to the INSPEC database which is currently growing at the rate of approximately 150,000 documents per year. The changes and additions to the Thesaurus arise from the requirements of this literature in the fields covered by INSPEC viz. physics, electrical engineering, electronics, computers & control.

Arrangement of the Thesaurus

The Thesaurus has two parts:-

(a) **Alphabetical display of terms**

This is the main part of the Thesaurus, listing in a single alphabetical order all terms both 'preferred' and 'lead-in'. Bold type is used to indicate 'preferred' terms. Cross reference or 'lead-in' terms are shown in medium type.

(b) **Hierarchical display of terms**

This collects the individual terms scattered throughout the main alphabetical display and displays them in families or hierarchies under the top terms (TT) of the hierarchy.

Structure of entries in the main alphabetical display

A typical entry is shown below:-

domain boundaries
for boundaries between magnetic domains and electric domain see magnetic domain walls and electric domain walls respectively see also antiphase boundaries
 NT antiphase boundaries
 BT crystal microstructure
 TT solid structure
 RT domains
 CC A8130 A8140
 FC a8130-e a8140-m

Under each preferred term (indicated by bold type) three sorts of information are given

(a) **'see also' references**

these are in italics and indicate related thesaurus terms used as cross references in the printed subject indexes to the INSPEC abstracts journals.

(b) **term relationships**

these show other terms in the thesaurus which are related to the given term. The type of relationship is shown and may be either

hierarchical:-

NT narrower i.e. more specific term
 BT broader i.e. more general term
 TT top term i.e. highest or most general term of the hierarchy

or associative:-

RT related term. This covers a range of non-hierarchical relationships, for example, part-whole relationships

e.g. electron tubes
 RT electron tube components

or object-property or phenomena relationships

e.g. atoms
 RT atomic spectra

It should be noted that in the hierarchical relationships, BT and NT, only terms one level up and down the hierarchy are shown.

(c) **classification codes**

these are codes from the INSPEC classification scheme and indicate the subject area in which the Thesaurus term is commonly used. There are two versions of the code

CC version of the code as used in the INSPEC Magnetic Tape Services
 FC full form of code as input to the INSPEC database

USE and Used For relationships

Where alternative terms, synonyms or alternative spellings exist for a given term, only one form will be chosen and reference made from the alternatives. This is done by the USE reference

e.g. grounding
USE earthing
cesium
USE caesium
AFC
USE automatic frequency control

In some cases a particular concept may be represented by more than one term. In such a case both terms are shown coupled by a +

e.g. magnetostrictive transducers
USE magnetostrictive devices + transducers

For each case where a USE reference is made, the preferred term will show any non-preferred terms which reference is made. This is done by means of the UF (Used For) indicator

e.g. caesium
UF cesium

Form of spelling

Where alternative English or American spellings exist, the English spelling is adopted. Reference is made from the American form.

Alphabetical arrangement

Arrangement of entries is made alphabetically on the 'word-by-word' or 'nothing-before-something' principle. For example, the term 'dielectrics' follows all terms beginning 'dielectric'.

e.g. dielectric susceptibility
dielectric thin films
dielectric waveguides
dielectrics

It should be noted that certain classes of semiconductor materials use roman numerals e.g. II-VI semiconductors.

These numerals are represented as letters e.g. II-VI and are arranged accordingly, appearing in the I section of the Thesaurus.

Homographs

Where a term included in the Thesaurus may have two quite distinct meanings, the meanings are defined by qualifiers placed after the term in parenthesis

e.g. bonds (chemical)
bonds (adhesive)
adhesion

The qualifier is considered to be part of the term.

1/f noise

USE random noise

A-centers

USE A-centres

A-centres

UF A-centers
F_a-centers
F_a-centres
BT F-centres
TT crystal defects
energy states
RT impurity electron states
CC A6170D A7155 A7630M A7850
FC a6170Dx a7155-h a7630Mg a7850-p

A/D conversion

USE analogue-digital conversion

ab initio calculations

RT atomic structure
electron energy states (condensed matter)
molecular energy level calculations
CC A3120D A3120E A3120G A7100
FC a3120Dn a3120Eq a3120Gv a7100-s

abacs

USE nomograms

aberrations

aberrations in optics and particle optics only
see also lenses; optical instrument testing; particle optics

UF astigmatism
barrel distortion
chromatic aberration
coma
curvature of field
optical aberrations
pincushion distortion
Seidel theory
spherical aberration
RT aspherical lenses
lenses
optical images
optical instrument testing
optics
particle optics
CC A4230F A4278 B4190
FC a4230Fb a4278-j b4190-m

abrasion

see also hardness; wear

UF abrasive wear
rubbing (abrasion)
scrubbing (abrasion)
scuffing
wear, abrasive
RT diamond
friction
grinding
hardness
polishing
wear
CC A4630P A6220P A8140P
FC a4630Pw a6220Pt a8140Pa

abrasive wear

USE abrasion

absolute gravity

USE gravity

absolute pressure measurement

USE pressure measurement

absolute temperature

USE temperature

absorbers (surge)

USE surge protection

absorption

for absorption of substances see sorption
see also acoustic wave absorption; electromagnetic wave absorption

UF attenuation
NT acoustic wave absorption
alpha-particle absorption
beta-ray absorption
cosmic ray absorption
electromagnetic wave absorption

absorption cont.

electron absorption
hyperon absorption
meson absorption
neutron absorption
proton absorption
damping
fading
reflection
sorption
transmission

RT

absorption spectra

USE spectra

absorption wavemeters

USE wavemeters

abstracting

BT information analysis
TT computer applications
CC C7240
FC c7240+j

abundance ratio

USE element relative abundance
isotope relative abundance

Ac

USE actinium

a.c. generators

see also asynchronous generators; synchronous generators

NT asynchronous generators
synchronous generators
BT a.c. machines
electric generators
TT electric machines
RT machine bearings
machine insulation
machine testing
machine theory
machine windings
rotors
stators
CC B8310 B8340
FC b8310-g b8340+r

a.c. machines

see also a.c. generators; a.c. motors; asynchronous machines; synchronous machines

NT a.c. generators
a.c. motors
asynchronous machines
synchronous machines
BT electric machines
TT electric machines
RT machine bearings
machine insulation
machine testing
machine theory
machine windings
rotors
stators
CC B8310 B8340
FC b8310-g b8340+r

a.c. motors

see also capacitor motors; commutator motors; induction motors; synchronous motors

NT capacitor motors
commutator motors
induction motors
synchronous motors
BT a.c. machines
electric motors
TT electric machines
RT machine bearings
machine insulation
machine testing
machine theory
machine windings
rotors
stators
CC B8310 B8340 C3260B
FC b8310-g b8340+r c3260Bn

a.c. network analysers

USE network analysers

acceleration

- see also acceleration control; acceleration measurement; accelerometers*
 BT kinematics
 TT mechanics
 RT acceleration control
 acceleration measurement
 accelerometers
 dynamics
 CC A0320
 FC a0320 + v

acceleration control

- see also acceleration measurement*
 BT mechanical variables control
 TT control of specific variables
 RT acceleration
 acceleration measurement
 accelerometers
 velocity control
 CC C3120E
 FC c3120Ec

acceleration measurement

- see also acceleration control*
 BT measurement
 TT measurement
 RT acceleration
 acceleration control
 accelerometers
 transducers
 CC A0630G C3120E
 FC a0630Gv c3120Ec

accelerators (particle)

- USE particle accelerators

accelerometers

- see also acceleration measurement*
 BT instruments
 transducers
 TT instruments
 transducers
 RT acceleration
 acceleration control
 acceleration measurement
 velocity measurement
 CC A0630G A0710 C3120E
 FC a0630Gv a0710 + k c3120Ec

accidents

- see also electric shocks; explosions; safety*
 NT electric shocks
 RT alarm systems
 electrical faults
 explosions
 fires
 fission reactor safety
 medicine
 nuclear explosions
 safety
 CC A0100 B0160 C0100 C0200
 FC a0100 + f b0160 + v c0100 + f c0200 + s

accommodation coefficient

- USE sorption

accounts data processing

- UF computing applications to accounting
 computing applications to billing
 BT financial data processing
 TT computer applications
 CC C7120
 FC c7120 + g

accumulation layers

- RT metal-insulator-semiconductor structures
 surface electron states
 CC A7320 A7340Q B2530F
 FC a7320 + g a7340Qm b2530Fc

accumulators

- USE secondary cells

acidity

- USE pH

acids, inorganic

- see individual compounds and hydrogen compounds*

acids, organic

- USE organic compounds

acoustic analysis

- RT acoustics
 CC A4300
 FC a4300 - z

acoustic applications

- see also ultrasonic applications*
 NT ultrasonic applications
 RT acoustic wave effects
 acoustics
 materials testing
 CC A4300 B7820
 FC a4300 - z b7820 + x

acoustic arrays

- BT acoustic equipment
 TT acoustic equipment
 RT nonlinear acoustics
 underwater sound
 CC A4325 A4385 B7810
 FC a4325 + d a4385 + z b7810 - c

acoustic delay lines

- see also ultrasonic delay lines*
 NT ultrasonic delay lines
 BT acoustic devices
 delay lines
 TT acoustic devices
 networks (circuits)
 CC A4385 B7810
 FC a4385 + z b7810 - c

acoustic detectors

- USE acoustic transducers

acoustic devices

- see also acoustic delay lines; acoustic generators; acoustic microscopes; acoustic microwave devices; acoustic parametric devices; acoustic radiators; acoustic receivers; acoustic resonators; acoustic transducers; bells; surface acoustic wave devices; ultrasonic devices*

- NT acoustic delay lines
 acoustic generators
 acoustic microscopes
 acoustic microwave devices
 acoustic parametric devices
 acoustic radiators
 acoustic receivers
 acoustic resonators
 acoustic transducers
 acousto-optical devices
 acoustoelectric devices
 bells
 surface acoustic wave devices
 ultrasonic devices
 RT acoustic equipment
 acoustic variables measurement
 acoustic waveguides
 acoustics
 audio equipment
 audio recording
 audio systems
 sonar
 sound reproduction
 CC A4360 A4385 A4388 B7810
 FC a4360 + g a4385 + z a4388 + q b7810 - c

acoustic dispersion

- see also ultrasonic dispersion*
 UF acoustic wave attenuation
 NT ultrasonic dispersion
 BT dispersion (wave)
 TT dispersion (wave)
 RT acoustic wave diffraction
 acoustic wave propagation
 acoustic wave refraction
 acoustic wave scattering
 acoustic wave velocity
 acoustics
 CC A4320 A4325 A4328 A4330 A5140 A6260 A6265
 FC a4320 + b a4325 + d a4328 + v a4330 + j a5140 + g a6260 + y a6265 + a

acoustic echoes

- USE echo

acoustic emission

- see also ultrasonic materials testing*
 RT acoustic superradiance
 acoustic waves
 ultrasonic materials testing
 CC A4335 A4390 A8170 B0790
 FC a4335 + l a4390 + e a8170 + x b0790 + q

acoustic equipment

see also acoustic arrays; acoustic wave interferometers; ultrasonic equipment

- NT acoustic arrays
- acoustic wave interferometers
- ultrasonic equipment
- RT acoustic devices
- acoustic microscopes
- acoustics
- audio equipment
- audio recording
- audio systems
- sonar
- sound reproduction
- CC A4385 B7810
- FC a4385 + z b7810 - c

acoustic field

- UF sound field
- RT acoustic intensity measurement
- acoustic radiators
- acoustics
- CC A4320 A4325 B7800
- FC a4320 + b a4325 + d b7800 - v

acoustic generators

see also earphones; loudspeakers; photoacoustic effect

- UF electroacoustic generators
- generators, acoustic
- sound generators
- NT loudspeakers
- BT acoustic devices
- TT acoustic devices
- RT acoustic radiators
- acoustics
- acoustoelectric effects
- alarm systems
- noise generators
- photoacoustic effect
- CC A4330 A4388 B7810
- FC a4330 + j a4388 + q b7810 - c

acoustic holography

- BT acoustic imaging
- holography
- TT acoustic imaging
- holography
- RT acoustics
- CC A4363 B4350 B7820
- FC a4363 + y b4350 + s b7820 + x

acoustic imaging

see also acoustic holography

- UF apodisation
- apodization
- imaging, acoustic
- NT acoustic holography
- RT acoustic microscopes
- acoustics
- CC A4363 A4385
- FC a4363 + y a4385 + z

acoustic impedance

see also acoustic wave velocity

- UF acoustic reactance
- acoustic resistance
- impedance, acoustic
- RT acoustic wave velocity
- acoustics
- CC A4300
- FC a4300 - z

acoustic insulating materials

USE noise abatement

acoustic intensity

see also acoustic noise; loudness

- UF sound intensity
- RT acoustic noise
- acoustic variables measurement
- acoustics
- loudness
- CC A4300
- FC a4300 - z

acoustic intensity measurement

- BT acoustic variables measurement
- intensity measurement
- TT measurement
- RT acoustic field
- loudness
- CC A4385 C3120Z

acoustic intensity measurement cont.

FC a4385 + z c3120Zy

acoustic magnetic resonance

see also acoustic nuclear magnetic resonance; acoustic paramagnetic resonance

- NT acoustic nuclear magnetic resonance
- acoustic paramagnetic resonance
- BT acoustic wave effects
- magnetic resonance
- TT radiation effects
- resonance
- CC A7600
- FC a7600 - c

acoustic measurements

USE acoustic variables measurement

acoustic microscopes

- BT acoustic devices
- microscopes
- TT acoustic devices
- instruments
- RT acoustic equipment
- acoustic imaging
- CC A4385 B7810
- FC a4385 + z b7810 - c

acoustic microwave devices

see also acoustic transducers; surface acoustic wave devices

- UF microwave acoustic devices
- BT acoustic devices
- microwave devices
- TT acoustic devices
- microwave devices
- RT acoustics
- solid-state microwave devices
- ultrasonic transducers
- CC B2860C
- FC b2860Ce

acoustic mode of crystals

USE lattice dynamics

acoustic noise

- UF noise levels, acoustic
- BT noise
- TT noise
- RT acoustic intensity
- acoustic variables measurement
- acoustic wave interference
- acoustics
- architectural acoustics
- hearing
- noise measurement
- vibrations
- CC A4350
- FC a4350 + z

acoustic noise measurement

- BT acoustic variables measurement
- noise measurement
- TT measurement
- RT noise abatement
- CC A4385 B7320Z
- FC a4385 + z b7320Zk

acoustic nuclear magnetic resonance

- BT acoustic magnetic resonance
- nuclear magnetic resonance
- TT radiation effects
- resonance
- CC A7660
- FC a7660 - y

acoustic paramagnetic resonance

- UF apr
- ultrasonic paramagnetic resonance
- BT acoustic magnetic resonance
- paramagnetic resonance
- TT radiation effects
- resonance
- CC A7630
- FC a7630 - a

acoustic parametric amplifiers

- BT acoustic parametric devices
- parametric amplifiers
- TT acoustic devices
- networks (circuits)
- parametric devices
- RT acoustic wave amplification

acoustic parametric amplifiers cont.

CC A4390
FC a4390 + e

acoustic parametric devices

see also acoustic parametric amplifiers; acoustic parametric oscillators

NT acoustic parametric amplifiers
acoustic parametric oscillators
BT acoustic devices
parametric devices
TT acoustic devices
parametric devices
CC A4390
FC a4390 + e

acoustic parametric oscillators

BT acoustic parametric devices
parametric oscillators
TT acoustic devices
networks (circuits)
parametric devices
CC A4390
FC a4390 + e

acoustic radiators

see also acoustic generators; Doppler effect

BT acoustic devices
TT acoustic devices
RT acoustic field
acoustic generators
acoustics
Doppler effect
loudspeakers
radiation
CC A4320 A4325 B7810
FC a4320 + b a4325 + d b7810 - c

acoustic reactance

USE acoustic impedance

acoustic receivers

see also microphones

BT acoustic devices
receivers
TT acoustic devices
receivers
RT acoustics
microphones
CC A4330 A4385 A4388 B6450 B7810
FC a4330 + j a4385 + z a4388 + q b6450 - w b7810 - c

acoustic resistance

USE acoustic impedance

acoustic resonators

BT acoustic devices
cavity resonators
TT acoustic devices
resonators
RT acoustics
CC A4300
FC a4300 - z

acoustic streaming

UF streaming, acoustic
RT acoustic wave propagation
acoustics
radiation pressure
CC A4320 A4700
FC a4320 + b a4700 - x

acoustic superradiance

BT superradiance
TT superradiance
RT acoustic emission
spin-phonon interactions
CC A6290
FC a6290 + w

acoustic surface wave devices

USE surface acoustic wave devices

acoustic surface waves

USE surface acoustic waves

acoustic transducers

see also acoustoelectric transducers; ultrasonic transducers

UF acoustic detectors
NT acoustoelectric transducers
ultrasonic transducers
BT acoustic devices

acoustic transducers cont.

transducers
TT acoustic devices
transducers
RT acoustic variables measurement
acousto-optical effects
CC A4388 B7810C
FC a4388 + q b7810Cm

acoustic variables control

see also noise abatement

BT control of specific variables
TT control of specific variables
RT acoustic variables measurement
noise abatement
CC C3120Z
FC c3120Zy

acoustic variables measurement

see also acoustic intensity measurement; acoustic noise measurement; acoustic wave velocity measurement; Q-factor measurement; ultrasonic measurement

UF acoustic measurements
pitch detection
sound measurement
NT acoustic intensity measurement
acoustic noise measurement
acoustic wave velocity measurement
ultrasonic measurement
BT measurement
TT measurement
RT acoustic devices
acoustic intensity
acoustic noise
acoustic transducers
acoustic variables control
acoustic wave interferometry
acoustic wave propagation
acoustics
anechoic chambers
magnetostrictive devices
piezoelectric devices
Q-factor measurement
reverberation chambers
vibration measurement
CC A4385 C3120Z
FC a4385 + z c3120Zy

acoustic velocity

USE acoustic wave velocity

acoustic wave absorption

see also noise abatement; ultrasonic absorption

UF acoustic wave attenuation
NT ultrasonic absorption
BT absorption
TT absorption
RT acoustic wave propagation
acoustic wave reflection
acoustic wave scattering
acoustic waves
noise abatement
CC A4320 A4325 A4328 A4335 A4330 A5140 A6260 A6265
FC a4320 + b a4325 + d a4328 + y a4335 + l a4330 + j a5140 + g a6260 + y a6265 + a

acoustic wave amplification

see also acoustoelectric effects

UF sound amplification
BT amplification
TT amplification
RT acoustic parametric amplifiers
acoustic wave propagation
acoustic waves
acoustoelectric effects
CC A4325 A4335 A5140 A6260 A6265
FC a4325 + d a4335 + l a5140 + g a6260 + y a6265 + a

acoustic wave attenuation

USE acoustic dispersion
acoustic wave absorption
acoustic wave scattering
acoustic wave transmission
ultrasonic absorption

acoustic wave diffraction

see also ultrasonic diffraction

NT ultrasonic diffraction
BT diffraction
TT diffraction
RT acoustic dispersion
acoustic wave propagation

acoustic wave diffraction cont.

acoustic waves
 CC A4320 A4335 A5140 A6260 A6265
 FC a4320 + b a4335 + l a5140 + g a6260 + y a6265 + a

acoustic wave diffusion

USE acoustic wave scattering

acoustic wave effects

see also acoustic magnetic resonance; acousto-optical effects; acoustoelectric effects; biological effects of acoustic radiation; sonoluminescence; ultrasonic effects

NT acoustic magnetic resonance
 acousto-optical effects
 acoustoelectric effects
 biological effects of acoustic radiation
 sonoluminescence
 ultrasonic effects

BT radiation effects

TT radiation effects

RT acoustic applications

acoustic waves

CC A4335 A5140 A6260 A6265

FC a4335 + l a5140 + g a6260 + y a6265 + a

acoustic wave interference

see also acoustic wave interferometers; acoustic wave interferometry

BT interference (wave)

TT interference

RT acoustic noise

acoustic wave interferometers

acoustic wave interferometry

acoustic wave propagation

acoustic waves

CC A4320 A4363 A5140 A6260 A6265

FC a4320 + b a4363 + y a5140 + g a6260 + y a6265 + a

acoustic wave interferometers

see also acoustic wave interferometry

BT acoustic equipment

interferometers

TT acoustic equipment

instruments

RT acoustic wave interference

acoustic wave interferometry

acoustic wave propagation

acoustic waves

CC A4385 B7810

FC a4385 + z b7810 - c

acoustic wave interferometry

see also acoustic wave interferometers

BT interferometry

TT interferometry

RT acoustic variables measurement

acoustic wave interference

acoustic wave interferometers

acoustic wave propagation

acoustic waves

CC A4363 A4385

FC a4363 + y a4385 + z

acoustic wave propagation

see also acoustic dispersion; atmospheric acoustics; Doppler effect; liquid helium sound propagation; seismic waves; shock waves; surface acoustic waves; ultrasonic propagation; underwater sound

UF sonic propagation

sound propagation

NT liquid helium sound propagation

second sound

ultrasonic propagation

BT wave propagation

TT wave propagation

RT acoustic dispersion

acoustic streaming

acoustic variables measurement

acoustic wave absorption

acoustic wave amplification

acoustic wave diffraction

acoustic wave interference

acoustic wave interferometers

acoustic wave interferometry

acoustic wave reflection

acoustic wave refraction

acoustic wave scattering

acoustic wave transmission

acoustic wave velocity

acoustic waves

atmospheric acoustics

Doppler effect

hearing

seismic waves

shock waves

acoustic wave propagation cont.

sonar

speech

underwater sound

CC A4320 A4325 A5140 A6260 A6265

FC a4320 + b a4325 + d a5140 + g a6260 + y a6265 + a

acoustic wave reflection

see also echo; reverberation; ultrasonic reflection

NT ultrasonic reflection

BT reflection

TT reflection

RT acoustic wave absorption

acoustic wave propagation

acoustic waves

architectural acoustics

echo

reverberation

CC A4320 A5140 A6260 A6265

FC a4320 + b a5140 + g a6260 + y a6265 + a

acoustic wave refraction

see also acoustic dispersion; ultrasonic refraction

NT ultrasonic refraction

BT refraction

TT refraction

RT acoustic dispersion

acoustic wave propagation

acoustic waves

CC A4320 A4325 A4330 A4328 A5140 A6260 A6265

FC a4320 + b a4325 + d a4330 + j a4328 + v a5140 + g a6260 + y a6265 + a

acoustic wave scattering

see also ultrasonic scattering

UF acoustic wave attenuation

acoustic wave diffusion

NT ultrasonic scattering

BT scattering

TT scattering

RT acoustic dispersion

acoustic wave absorption

acoustic wave propagation

acoustic waves

CC A4320 A4325 A5140 A6260 A6265

FC a4320 + b a4325 + d a5140 + g a6260 + y a6265 + a

acoustic wave transmission

see also ultrasonic transmission

UF acoustic wave attenuation

NT ultrasonic transmission

BT transmission

TT transmission

RT acoustic wave propagation

acoustic waves

architectural acoustics

CC A4320 A4325 A4328 A4330 A5140 A6260 A6265

FC a4320 + b a4325 + d a4328 + v a4330 + j a5140 + g a6260 + y a6265 + a

acoustic wave velocity

see also acoustic dispersion; liquid helium sound propagation; shock waves; ultrasonic velocity

UF acoustic velocity

NT ultrasonic velocity

BT velocity

TT velocity

RT acoustic dispersion

acoustic impedance

acoustic wave propagation

acoustic wave velocity measurement

acoustic waves

liquid helium sound propagation

Mach number

shock waves

CC A4300 A5140 A6260 A6265

FC a4300 - z a5140 + g a6260 + y a6265 + a

acoustic wave velocity measurement

see also ultrasonic velocity measurement

NT ultrasonic velocity measurement

BT acoustic variables measurement

velocity measurement

TT measurement

RT acoustic wave velocity

CC A4385 B7320Z

FC a4385 + z b7320Zk

acoustic waveguides

BT waveguides

TT waveguides

RT acoustic devices

acoustic waveguides cont.

CC A4320 A4385 B7810
FC a4320 + b a4385 + z b7810 - c

acoustic waves

see also acoustic emission; magnetoacoustic effects; shock waves; surface acoustic waves; ultrasonic waves

UF infrasonic waves
sound
sound waves
NT magnetoacoustic effects
shock waves
surface acoustic waves
ultrasonic waves
BT elastic waves
TT waves
RT acoustic emission
acoustic wave absorption
acoustic wave amplification
acoustic wave diffraction
acoustic wave effects
acoustic wave interference
acoustic wave interferometers
acoustic wave interferometry
acoustic wave propagation
acoustic wave reflection
acoustic wave refraction
acoustic wave scattering
acoustic wave transmission
acoustic wave velocity
acoustics
Doppler effect
hearing
lattice dynamics
musical acoustics
phonons
radiation
CC A4300 A5140 A6260 A6265
FC a4300 - z a5140 + g a6260 + y a6265 + a

acoustical laboratories

see also anechoic chambers; reverberation chambers

BT laboratories
TT laboratories
RT acoustics
anechoic chambers
reverberation chambers
testing
CC A4385 A4300
FC a4385 + z a4300 - z

acoustics

see also acoustic applications; acoustic devices; acoustic equipment; acoustic noise; anechoic chambers; architectural acoustics; atmospheric acoustics; audio acoustics; hearing; musical acoustics; photoacoustic effect; sound reproduction; ultrasonics; underwater sound; vibrations

UF sound
NT architectural acoustics
atmospheric acoustics
audio acoustics
musical acoustics
nonlinear acoustics
ultrasonics
underwater sound
RT acoustic analysis
acoustic applications
acoustic devices
acoustic dispersion
acoustic equipment
acoustic field
acoustic generators
acoustic holography
acoustic imaging
acoustic impedance
acoustic intensity
acoustic microwave devices
acoustic noise
acoustic radiators
acoustic receivers
acoustic resonators
acoustic streaming
acoustic variables measurement
acoustic waves
acoustical laboratories
acousto-optical effects
acoustoelectric effects
anechoic chambers
harmonics
hearing
loudness
photoacoustic effect
reverberation chambers
shock waves

acoustics cont.

sound reproduction
speech recognition
vibrations
CC A4300
FC a4300 - z

acousto-optical devices

see also acousto-optical effects

BT acoustic devices
TT acoustic devices
RT acousto-optical effects
optoelectronic devices
CC B4170
FC b4170 + j

acousto-optical effects

see also acousto-optical devices

UF acoustooptics
BT acoustic wave effects
optical properties of substances
optical properties of substances
radiation effects
RT acoustic transducers
acoustics
acousto-optical devices
lasers
light coherence
optical modulation
optoelectronic devices
ultrasonics
CC A5140 A5170 A7820H
FC a5140 + g a5170 + e a7820Hm

acoustoelasticity

USE elasticity

acoustoelectric devices

see also acoustoelectric transducers

NT acoustoelectric transducers
BT acoustic devices
TT acoustic devices
CC B6450
FC b6450 - w

acoustoelectric effects

UF electroacoustic effects
BT acoustic wave effects
electric field effects
TT electric field effects
radiation effects
RT acoustic generators
acoustic wave amplification
acoustics
domains
phonon drag
piezoelectric semiconductors
semiconductor materials
semiconductors
CC A4388 A5140 A5150 A7250
FC a4388 + q a5140 + g a5150 + p a7250 + e

acoustoelectric transducers

see also earphones; headphones; hydrophones; loudspeakers; microphones

NT earphones
headphones
hydrophones
loudspeakers
microphones
BT acoustic transducers
acoustoelectric devices
TT acoustic devices
transducers
RT telephone sets
CC B6450 B7810C
FC b6450 - w b7810Cm

acoustooptics

USE acousto-optical effects

actinide alloys

see also actinide compounds; plutonium alloys; uranium alloys

NT plutonium alloys
uranium alloys
BT alloys
TT alloys
RT actinide compounds

actinide compounds

see also compounds of individual actinides, e.g. uranium compounds

see also actinide alloys

UF actinide metal compounds

NT actinium compounds
americium compounds
berkelium compounds
californium compounds
curium compounds
einsteinium compounds
fermium compounds
lawrencium compounds
mendelevium compounds
neptunium compounds
nobelium compounds
plutonium compounds
protactinium compounds
thorium compounds
uranium compounds
RT actinide alloys
actinides

actinide metal compounds

USE actinide compounds

actinide metals

USE actinides

actinides

see also individual actinides, e.g. uranium

UF actinide metals

NT actinium
americium
berkelium
californium
curium
einsteinium
fermium
lawrencium
mendelevium
neptunium
nobelium
plutonium
protactinium
thorium
uranium
RT actinide compounds

actinium

see also nuclei with

UF Ac
BT actinides
TT actinides
RT actinium compounds

actinium compounds

BT actinide compounds
TT actinide compounds
RT actinium

actinometers

USE radiometers

actinometry

USE radiometry

activation analysis

USE chemical analysis by nuclear reactions and scattering

active antennas

BT antennas
TT antennas
CC B5260 B5270
FC b5260 + c b5270 - y

active circuits

USE active networks

active filters

BT active networks
filters
TT networks (circuits)
CC B1270E
FC b1270Ef

active networks

see also active filters; gyrators; impedance convertors; negative impedance convertors

UF active circuits
NT active filters
gyrators

active networks cont.

impedance convertors
negative impedance convertors
BT networks (circuits)
TT networks (circuits)
RT demodulators
modulators
CC B1270E
FC b1270Ef

active nitrogen

USE nitrogen

active oxygen

USE oxygen

actuators

see also electric actuators

NT electric actuators
BT control equipment
TT control equipment
RT electromagnets
servomechanisms
servomotors
starting
transducers
valves
CC C3260B
FC c3260Bn

adaptive control

see also adaptive optics; adaptive systems; model reference adaptive control systems

NT adaptive optics
BT automatic control
TT automatic control
RT adaptive systems
artificial intelligence
biocybernetics
cognitive systems
compensation
control theory
learning systems
model reference adaptive control systems
self-adjusting systems
CC C1340E
FC c1340En

adaptive optics

BT adaptive control
optics
TT automatic control
optics
RT adaptive systems
optical systems
CC A4200 C1240 C1340E
FC a4200 - m c1240 + z c1340En

adaptive systems

see also adaptive control; adaptive optics; cognitive systems; learning systems; model reference adaptive control systems; pattern recognition; self-adjusting systems

NT self-adjusting systems
BT control systems
TT control systems
RT adaptive control
adaptive optics
artificial intelligence
automata theory
cognitive systems
cybernetics
learning systems
CC C1240 C1340E
FC c1240 + z c1340En

adders

UF binary adders
carry circuits
half adders
BT digital circuits
TT networks (circuits)
RT carry logic
counting circuits
logic circuits
shift registers
summing circuits
CC C5120
FC c5120 + d

adding machines

USE calculating apparatus

adherence
USE adhesion

adhesion
UF adherence
bonds (adhesive)
tackiness
RT joining processes
surface phenomena
wetting
CC A8190
FC a8190 + m

adhesion
+ **electrostatics**
UF Johnsen-Rahbek effect

adiabatic compression, plasma
USE plasma heating

adiabatic demagnetisation
USE magnetic cooling

adion
USE adsorption

administrative data processing
see also distributive data processing; educational administrative data processing; financial data processing; logistics data processing; management information systems; manufacturing data processing; marketing data processing; medical administrative data processing; reservation computer systems; word processing
UF ADP
computing applications to business
data processing (administrative)
NT distributive data processing
educational administrative data processing
financial data processing
logistics data processing
management information systems
manufacturing data processing
marketing data processing
medical administrative data processing
reservation computer systems
word processing
BT computer applications
TT computer applications
RT commerce
management
management science
CC C7100
FC c7100 - c

admittance, electric
USE electric admittance

admittance, electric, measurement
USE electric admittance measurement

ADP
USE administrative data processing

ADP (ammonium dihydrogen phosphate)
USE ammonium compounds

adsorbed layers
see also monolayers
RT adsorption
films
Langmuir films
liquid films
monolayers
surface phenomena
CC A6845 A8265M
FC a6845 v a8265My

adsorption
see also heat of adsorption
UF adion
BT sorption
TT surface phenomena
RT adsorbed layers
getters
heat of adsorption
interface phenomena
surface phenomena
wetting
CC A6845 A8265M
FC a6845 v a8265My

advertising
RT advertising data processing
CC C7190
FC c7190 + k

advertising data processing
UF computing applications to advertising,
BT marketing data processing
TT computer applications
RT advertising
CC C7190
FC c7190 + k

aerial cableway systems
USE cableway systems

aerials
USE antennas

aerodromes
USE airports

aerodynamics
see also hypersonic flow; jets; shock waves; supersonic flow; transonic flow; turbulence; wind tunnels
UF gas dynamics
BT fluid dynamics
TT mechanics
RT aircraft
boundary layers
gases
hydrodynamics
hypersonic flow
jets
shock waves
supersonic flow
transonic flow
turbulence
wind tunnels
CC A4740
FC a4740 - c

aeronomy
USE meteorology
terrestrial atmosphere
upper atmosphere

aerosols
see also foams
BT disperse systems
TT disperse systems
RT dust
sprays
CC A4755K A9200 A8270R
FC a4755Kp a9200 - h a8270Rp

aerospace
see also aerospace computing; aerospace control; aerospace instrumentation; aerospace propulsion; aerospace simulation; aerospace test facilities; aircraft; ground support systems; space research; space vehicles; terrestrial atmosphere
RT aerospace computing
aerospace control
aerospace instrumentation
aerospace propulsion
aerospace simulation
aerospace test facilities
aircraft
ground support systems
helicopters
space research
space vehicles
CC B7600 C3360L C7460
FC b7600 - w c3360Lx c7460 + y

aerospace applications of computing
USE aerospace computing

aerospace computer control
see also aerospace computing; air traffic computer control
NT air traffic computer control
BT transport computer control
TT computer applications
RT aerospace computing
CC C3360L C7460
FC c3360Lx c7460 + y

aerospace computing

- see also aerospace computer control; transport computer control*
 UF aerospace applications of computing
 computing applications to aerospace engineering
 BT engineering computing
 TT computer applications
 RT aerospace
 aerospace computer control
 aerospace simulation
 transport computer control
 CC C7460
 FC c7460 + y

aerospace control

- see also air traffic control; attitude control*
 NT air traffic control
 attitude control
 RT aerospace
 aerospace instrumentation
 aerospace simulation
 aircraft
 control systems
 helicopters
 CC C3360L
 FC c3360Lx

aerospace engines

- BT engines
 TT engines
 RT aerospace propulsion
 CC C3360L B7640
 FC c3360Lx b7640 + n

aerospace ground equipment

- USE ground support equipment

aerospace instrumentation

- see also aircraft instrumentation; Langmuir probes*
 NT aircraft instrumentation
 BT instrumentation
 TT instrumentation
 RT aerospace
 aerospace control
 aircraft
 altimeters
 helicopters
 Langmuir probes
 radio direction-finding
 space vehicles
 CC B7630
 FC b7630 - t

aerospace propulsion

- see also aerospace engines*
 BT propulsion
 TT propulsion
 RT aerospace
 aerospace engines
 fuel
 heat engines
 ion engines
 CC B7640
 FC b7640 + n

aerospace simulation

- see also aerospace test facilities*
 BT simulation
 TT simulation
 RT aerospace
 aerospace computing
 aerospace control
 aerospace test facilities
 wind tunnels
 CC B7620 C3360L C7460
 FC b7620 + y c3360Lx c7460 + y

aerospace test facilities

- see also wind tunnels*
 NT wind tunnels
 BT test facilities
 TT engineering facilities
 RT aerospace
 aerospace simulation
 laboratories
 testing
 CC B7620
 FC b7620 + y

a.f. amplifiers

- USE audio-frequency amplifiers

AFC

- USE automatic frequency control

afterglows

- RT discharges (electric)
 light scattering
 luminescence
 phosphorescence
 CC A5280H B2315
 FC a5280Hh b2315 + 1

Ag

- USE silver

AGC

- USE automatic gain control

age (Earth)

- USE geochronology

age determination, radioactive

- USE radioactive dating

age hardening

- USE precipitation hardening

ageing

- see also precipitation hardening; strain ageing*

- UF ageing characteristics
 aging
 NT strain ageing
 RT alloys
 heat treatment
 metallurgy
 phase transformations
 precipitation
 precipitation hardening
 CC A8140G
 FC a8140Gf

ageing characteristics

- USE ageing

aging

- USE ageing

agriculture

- see also farming*

- NT farming
 RT dairying
 electric fences
 natural resources
 CC A9100 B8680 C3310C C7490
 FC a9100 - w b8680 + h c3310Cp c7490 + w

air

- see also terrestrial atmosphere*

- BT terrestrial atmosphere
 TT terrestrial atmosphere
 RT air blast circuit breakers
 air conditioning
 air pollution
 airglow
 atmospheric composition
 compressors
 pneumatic control equipment

air bases

- USE airports

air blast circuit breakers

- BT gas blast circuit breakers
 TT control equipment
 switchgear
 RT air
 CC B8370
 FC b8370 + p

air bubbles

- USE bubbles

air clutches

- USE clutches

air compressors

- USE compressors

air conditioning*see also ventilation*

- RT air
 - building
 - compressors
 - cooling
 - domestic appliances
 - environmental engineering
 - environmental testing
 - heat pumps
 - humidity
 - humidity control
 - power utilisation
 - temperature
 - total energy systems
 - ventilation
- CC B8550 C3340B
- FC b8550 + y c3340Bk

air permeability

USE permeability

air pollution*see also air pollution detection and control; smoke*

- UF atmospheric pollution
- industrial atmospheres
- NT air pollution detection and control
- BT pollution
- TT pollution
- RT air
 - atmospheric composition
 - drops
 - dust
 - fallout
 - pollution detection and control
 - smoke
 - terrestrial atmosphere
- CC A9260 B7720 C3120P C3310G
- FC a9260 - d b7720 + k c3120Pb c3310Gy

air pollution detection and control

- BT air pollution
- pollution detection and control
- TT pollution
- pollution detection and control
- RT atmospheric measuring apparatus
- atmospheric techniques
- particle counting
- particle size measurement
- CC A9260T B7720 C3120P C3310G
- FC a9260Ta b7720 + k c3120Pb c3310Gy

air pumps

USE compressors

air terminals

USE airports

air traffic

- BT traffic
- TT traffic
- RT air-traffic control
- aircraft
- helicopters
- traffic recording
- CC B7650C C3360L
- FC b7650Ct c3360Lx

air traffic computer control

- UF computerised air traffic control
- computerized air traffic control
- BT aerospace computer control
- air-traffic control
- traffic computer control
- TT aerospace control
- computer applications
- traffic control
- CC C3360L C7460
- FC c3360Lx c7460 + y

air-traffic control*see also air traffic computer control; aircraft*

- NT air traffic computer control
- BT aerospace control
- traffic control
- TT aerospace control
- traffic control
- RT air traffic
- aircraft
- aircraft communication
- airports
- helicopters

air-traffic control cont.

- radar applications
- radionavigation
- traffic recording
- CC B7650C C3360L
- FC b7650Ct c3360Lx

aircraft*see also aerospace control; aerospace instrumentation; air-traffic control;*

- helicopters
- NT helicopters
- RT aerodynamics
- aerospace
- aerospace control
- aerospace instrumentation
- air traffic
- air traffic control
- aircraft communication
- balloons
- ground support systems
- hovercraft
- military equipment
- missiles
- rockets
- transportation
- CC B7600 C3360L C7460
- FC b7600 - w c3360Lx c7460 + y

aircraft communication

- BT mobile communication systems
- TT telecommunication systems
- RT air-traffic control
- aircraft
- ground support equipment
- ground support systems
- helicopters
- navigation
- radio
- radiotelephony
- CC B6250F
- FC b6250Fn

aircraft instrumentation

- UF avionic systems
- BT aerospace instrumentation
- TT instrumentation
- RT radioaltimeters
- CC B7630 C3360L C7460
- FC b7630 - t c3360Lx c7460 + y

airfields

USE airports

airglow*see also atmospheric spectra; aurora; nightglow; sky brightness; twilight*

- UF dayglow
- polar cap flow
- NT nightglow
- BT light
- TT radiation
- waves
- RT air
- atmospheric optics
- atmospheric spectra
- aurora
- chemiluminescence
- Rayleigh scattering
- sky brightness
- terrestrial atmosphere
- twilight
- upper atmosphere
- CC A9410Q
- FC a9410Qe

airmail

USE postal services

airports

- UF aerodromes
- air bases
- air terminals
- airfields
- heliports
- landing fields
- RT air traffic control
- CC B7650C C3360L C7460
- FC b7650Ct c3360Lx c7460 + y

Al

USE aluminium

alarm systems

- UF warning systems
- RT accidents
 - acoustic generators
 - bells
 - detectors
 - indicators
 - monitoring
 - protection
 - safety
 - safety systems
 - signalling
 - telecontrol
- CC B0160 C3370L
- FC b0160 + v c3370Le

albedo

- RT cosmic rays
 - Moon
 - planetary atmospheres
 - planets
 - reflection
 - scattering
 - solar radiation
- CC A9000 A9440 A2820
- FC a9000 - j a9440 - m a2820 - w

alclad

- USE aluminium alloys

Alfven waves

- USE magnetohydrodynamic waves
- solid-state plasma

algebra

- see also Boolean algebra; linear algebra; matrix algebra*
- UF classical algebra
 - majority algebra
 - Neumann algebra
 - pair algebra
 - pentary algebra
- NT Boolean algebra
 - group theory
 - linear algebra
 - polynomials
- BT mathematics
- TT natural sciences
- RT current algebra
- CC B0210 C1110
- FC b0210 + t c1110 + p

ALGOL

- see also ALGOL 68*
- NT ALGOL 68
- BT algorithmic languages
 - procedure-oriented languages
- TT formal languages
 - programming languages
- CC C6140D
- FC c6140Dh

ALGOL 68

- BT ALGOL
- TT formal languages
 - programming languages
- CC C6140D
- FC c6140Dh

algorithm theory

- see also computational complexity; programming theory*
- NT computational complexity
- RT programming
 - programming theory
 - subroutines
- CC C4240
- FC c4240 + t

algorithmic languages

- see also ALGOL*
- NT ALGOL
- BT formal languages
- TT formal languages
- RT programming languages
- CC C4210
- FC c4210 + t

algorithms (computer listings)

- USE subroutines -

aliphatic compounds

- USE organic compounds

alkali metal alloys

- see also caesium alloys; lithium alloys; potassium alloys; rubidium alloys; sodium alloys*
- NT caesium alloys
 - lithium alloys
 - potassium alloys
 - rubidium alloys
 - sodium alloys
- BT alloys
- TT alloys
- RT alkali metal compounds

alkali metal compounds

- see also alkali metal alloys; alkali metal halides; caesium compounds; francium compounds; lithium compounds; potassium compounds; rubidium compounds; sodium compounds*
- NT alkali metal halides
 - caesium compounds
 - francium compounds
 - lithium compounds
 - potassium compounds
 - rubidium compounds
 - sodium compounds
- RT alkali metal alloys
- alkali metals

alkali metal halides

- see also compounds of individual alkali metals, e.g. sodium compounds*
- BT alkali metal compounds
 - halides
- TT alkali metal compounds
 - halides

alkali metals

- see also caesium; francium; lithium; potassium; rubidium; sodium*
- NT caesium
 - francium
 - lithium
 - potassium
 - rubidium
 - sodium
- BT metals
- TT metals
- RT alkali metal compounds

alkaline earth alloys

- see also beryllium alloys; magnesium alloys*
- NT beryllium alloys
 - magnesium alloys
- BT alloys
- TT alloys

alkaline earth compounds

- see also barium compounds; beryllium compounds; calcium compounds; magnesium compounds; radium compounds; strontium compounds*
- NT barium compounds
 - beryllium compounds
 - calcium compounds
 - magnesium compounds
 - radium compounds
 - strontium compounds
- RT alkaline earth metals

alkaline earth metals

- see also barium; beryllium; calcium; magnesium; radium; strontium*
- NT barium
 - beryllium
 - calcium
 - magnesium
 - radium
 - strontium
- BT metals
- TT metals
- RT alkaline earth compounds

alkalinity

- USE pH

allotropism

- USE polymorphism

alloy steel

- BT steel
- TT alloys

alloying additions

- RT alloys

alloys

alloys such as Au-Cu, Au-Cu-Zn are indexed under components of the named elements i.e. gold alloys; copper alloys; zinc alloys in these examples

see also actinide alloys; alkali metal alloys; alkaline earth alloys; alloying additions; aluminium alloys; antimony alloys; arsenic alloys; bismuth alloys; boron alloys; cadmium alloys; dilute alloys; eutectic alloys; gallium alloys; germanium alloys; indium alloys; lead alloys; liquid alloys; mercury alloys; rare earth alloys; selenium alloys; silicon alloys; solid solutions; superalloys; tellurium alloys; thallium alloys; tin alloys; transition metal alloys; zinc alloys

UF intermetallic compounds

Laves phases

NT actinide alloys

alkali metal alloys

alkaline earth alloys

aluminium alloys

antimony alloys

arsenic alloys

bismuth alloys

boron alloys

cadmium alloys

dilute alloys

eutectic alloys

gallium alloys

germanium alloys

indium alloys

lead alloys

liquid alloys

mercury alloys

rare earth alloys

selenium alloys

silicon alloys

superalloys

tellurium alloys

thallium alloys

tin alloys

transition metal alloys

zinc alloys

RT ageing

alloying additions

crystal atomic structure of alloys

Ising lattices

Ising model

magnetic properties of dilute systems

metallic glasses

metallurgy

metals

solid solutions

almanacs

USE astronomical ephemerides

alnico alloys

USE iron alloys

Al₂O₃

USE alumina

Al₂O₃-α

USE corundum

α-Al₂O₃

USE corundum

alpha-decay

see also alpha decay theory; alpha-particle spectra

BT radioactivity

TT nuclear physics

RT alpha-particle spectra

alpha-particles

nuclear decay theory

radioactive decay periods

radioactive decay schemes

CC A2360

FC a2360 + d

alpha-decay theory

see also alpha decay

BT nuclear decay theory

TT nuclear physics

CC A2360

FC a2360 + d

alpha-particle absorption

UF alpha-particle attenuation

BT absorption

TT absorption

RT alpha-particles

CC A6180J A2560

FC a6180Jp a2560 - q

alpha-particle angular distribution

see also alpha-particle spectra

RT alpha particle-nucleus scattering

alpha-particle spectra

alpha-particles

CC A2360 A2560

FC a2360 + d a2560 - q

alpha-particle attenuation

USE alpha-particle absorption

alpha-particle detection and measurement

see also alpha-particle spectrometers; radioactivity measurement

BT radiation detection and measurement

TT measurement

RT alpha-particle spectrometers

alpha-particles

radioactivity measurement

CC A2940 A2970 B7420

FC a2940 - y a2970 - w b7420 - m

alpha-particle effects

BT radiation effects

TT radiation effects

RT alpha particle-nucleus reactions

alpha-particles

CC A6180J

FC a6180Jp

alpha-particle interactions

USE alpha particle-nucleus reactions

alpha-particle model

USE nuclear cluster model

alpha particle-nucleus reactions

for inelastic alpha particle-nucleus scattering, see "alpha particle-nucleus scattering"

UF alpha-particle interactions

BT nuclear reactions and scattering

TT nuclear physics

RT alpha-particle effects

CC A2560

FC a2560 - q

alpha particle-nucleus scattering

UF alpha-particle scattering

BT nuclear reactions and scattering

TT nuclear physics

RT alpha-particle angular distribution

CC A2560C

FC a2560Ca

alpha-particle scattering

USE alpha particle-nucleus scattering

alpha-particle spectra

see also alpha-particle angular distribution

BT spectra

TT spectra

RT alpha-decay

alpha-particle angular distribution

alpha-particle spectrometers

alpha-particles

nuclear decay theory

radioactivity

CC A2360 A2930E B7420

FC a2360 + d a2930Ee b7420 - m

alpha-particle spectrometers

see also alpha-particle spectra

BT particle spectrometers

TT instruments

RT alpha-particle detection and measurement

alpha-particle spectra

alpha-particles

CC A2930E B7440 C3380D C7320

FC a2930Ee b7440 + p c3380Dv c7320 + f

alpha-particles

see also cosmic ray alpha-particles and helium nuclei

UF alpha-radiation

alpha-rays

NT cosmic ray alpha-particles and helium nuclei

BT bosons

composite particles

nuclei with mass number 1 to 5

elementary particles

nucleus

RT alpha-decay

alpha-particle absorption