

AP Physics C: Electricity and Magnetism

Glossary · · every term in the course, A–Z

English		Pinyin
always perpendicular		chuí zhí
 ammeter		diàn liú biǎo
<i>/ˈæmɪtə/</i>		
 amperes		ān péi
<i>/ˈæmpɛəz/</i>		
 Amperian loop		ān péi huán lù
<i>/æmˈpiəriən lu:p/</i>		
 Ampère's law		ān péi dīng lǜ
<i>/ˈæmpɛəz lɔ:/</i>		
angular frequency		jiǎo pín lǜ
<i>/ˈæŋɡjələ ˈfri:kwənsi/</i>		
 area vector		miàn jī shǐ liàng
<i>/ˈeəriə ˈvektə/</i>		
atomic magnetic dipoles		yuán zǐ cí ǒu jí zǐ
attract		xī yǐn
<i>/əˈtrækt/</i>		
back emf		fǎn diàn dòng shì
Biot-Savart law	-	bì ào - sà fá ěr dīng lǜ
 Biot-Savart law	-	bì ào - sà fá ěr dīng lǜ
<i>/ˈbiɒt ˈsævɑ:t lɔ:/</i>		
branch current		zhī lù diàn liú
 capacitance		diàn róng
<i>/kəˈpæsɪtəns/</i>		
 capacitor		diàn róng qì
<i>/kəˈpæsɪtə/</i>		
 centripetal force		xiàng xīn lì
<i>/senˈtrɪpɪtl fɔ:s/</i>		
charge density		diàn hè mì dù
<i>/tʃɑ:dʒ ˈdensɪti/</i>		
charge distribution		diàn hè fēn bù
 charging by conduction		chuán dǎo qǐ diàn
<i>/ˈtʃɑ:dʒɪŋ baɪ kənˈdʌkʃn/</i>		

English	Pinyin
 charging by friction /'tʃɑ:dʒɪŋ baɪ 'frɪkʃn/	mó cā qǐ diàn
 charging by induction /'tʃɑ:dʒɪŋ baɪ ɪn'dakʃn/	gǎn yìng qǐ diàn
 circuit diagram /'sɜ:kɪt 'daɪəgræm/	diàn lù tú
closed circuit	bì hé diàn lù
closed surface	bì hé qū miàn
 compass /'kʌmpəs/	zhǐ nán zhēn
 concentric circles /kən'sentrik 'sɜ:klz/	tóng xīn yuán
 conductor /kən'dʌktə/	dǎo tǐ
 conservation of charge /ˌkɒnsə'veɪʃn ɒv tʃɑ:dʒ/	diàn hè shǒu héng
 conservation of energy /ˌkɒnsə'veɪʃn ɒv 'enədʒi/	néng liàng shǒu héng
 conservative force /kən'sɜ:vətɪv fɔ:s/	bǎo shǒu lì
conserved /kən'sɜ:vɪd/	shǒu héng
⋮ continuous charge distribution /kən'tɪnju:əs tʃɑ:dʒ ˌdɪstrɪ'bju:ʃn/	lián xù diàn hè fēn bù
→ conventional current /kən'venʃənəl 'kʌrənt/	cháng guī diàn liú
coulomb /'ku:lɒm/	kù lún
 Coulomb's law /'ku:lɒmz lɔ:/	kù lún dìng lǚ
 cross-sectional area /krɒs 'sekʃənəl 'eəriə/	héng jié miàn jī
 current density /'kʌrənt 'densɪti/	diàn liú mì dù
 cylindrical symmetry /sɪ'lɪndrɪkl 'sɪmətri/	zhù duì chèn
 diamagnetic /ˌdaɪəmæg'netɪk/	kàng cí xìng

English	Pinyin
 dielectric <i>/ˌdaɪˈlektɹɪk/</i>	diàn jiè zhì
 dielectric constant <i>/ˌdaɪˈlektɹɪk ˈkɒnstənt/</i>	jiè diàn cháng shù
 differential equation <i>/ˌdɪfəˈrenʃl ɪˈkweɪʒn/</i>	wēi fēn fāng chéng
direction <i>/daɪˈrekʃn/</i>	fāng xiàng
→ drift velocity <i>/drɪft vəˈlɒsɪti/</i>	piāo yí sù dù
 eddy currents <i>/ˈedi ˈkʌrənts/</i>	wō diàn liú
 electric charge <i>/ɪˈlektɹɪk tʃɑːdʒ/</i>	diàn hè
 electric current <i>/ɪˈlektɹɪk ˈkʌrənt/</i>	diàn liú
 electric field <i>/ɪˈlektɹɪk fiːld/</i>	diàn chǎng
electric field is zero	diàn chǎng wèi líng
 electric flux <i>/ɪˈlektɹɪk flʌks/</i>	diàn tōng liàng
 electric potential <i>/ɪˈlektɹɪk pəˈtenʃl/</i>	diàn shì
 electric potential energy <i>/ɪˈlektɹɪk pəˈtenʃl ˈenədʒi/</i>	diàn shì néng
electric power <i>/ɪˈlektɹɪk ˈpaʊə/</i>	diàn gōng lǚ
 electromagnetic waves <i>/ɪˌlektɹəʊmægˈnetɪk weɪvz/</i>	diàn cí bō
electromagnetism	diàn cí xué
electron volt	diàn zǐ fú tè
 electrons <i>/ɪˈlektɹɒnz/</i>	diàn zǐ
 electroscope <i>/ɪˌlektɹəʊˈskəʊp/</i>	yàn diàn qì
 electrostatic equilibrium <i>/ɪˌlektɹəʊˈstætɪk ɪˈkwɪˈlɪbrɪəm/</i>	jìng diàn píng héng
 electrostatic shielding <i>/ɪˌlektɹəʊˈstætɪk ˈʃɪːldɪŋ/</i>	jìng diàn píng bì

English	Pinyin
 elementary charge <i>/ˌelɪ'mentəri tʃɑːdʒ/</i>	jī běn diàn hè
 emf <i>/emf/</i>	diàn dòng shì
enclosed	fēng bì
energy <i>/ˈenədʒi/</i>	néng liàng
energy density	néng liàng mì dù
energy stored <i>/ˈenədʒi stɔːd/</i>	chǔ cún de néng liàng
energy transfer <i>/ˈenədʒi ˈtrænsfɜː/</i>	néng liàng zhuǎn yí
= equipotential <i>/iːkwɪpə'tenʃl/</i>	děng shì miàn
 equipotential surface <i>/iːkwɪpə'tenʃl 'sɜːfɪs/</i>	děng shì miàn
 equivalent capacitance <i>/ɪ'kwɪvələnt kə'pæsɪtəns/</i>	děng xiào diàn róng
 equivalent resistance <i>/ɪ'kwɪvələnt rɪ'zɪstəns/</i>	děng xiào diàn zǔ
every distinct pair	měi yī duì
external agent	wài lì
 Faraday cage <i>/ˈfærədeɪ keɪdʒ/</i>	fǎ lǎ dì lóng
 Faraday's law <i>/ˈfærədeɪz lɔː/</i>	fǎ lǎ dì dīng lǜ
 ferromagnetic <i>/ˌferəmæg'netɪk/</i>	tiě cí xìng
 field <i>/fiːld/</i>	chǎng
 field lines <i>/fiːld laɪnz/</i>	diàn chǎng xiàn
 fundamental property <i>/ˌfʌndə'mentl 'prɒpəti/</i>	jī běn shǔ xìng
 Gauss's law <i>/ˈgaʊsɪz lɔː/</i>	gāo sī dīng lǜ
 Gaussian surface <i>/ˈgaʊʃn 'sɜːfɪs/</i>	gāo sī miàn

English	Pinyin
 generator <i>/ˈdʒenəreɪtə/</i>	fā diàn jī
 gradient <i>/ˈɡreɪdɪənt/</i>	tī dù
gravitational	zhòng lì
 ground <i>/ɡraʊnd/</i>	jiē dì
 Hall effect <i>/hɔ:l ɪˈfekt/</i>	huò ěr xiào yìng
 henries <i>ˈhenriz/</i>	hēng lì
 ideal battery <i>/aɪˈdiəl ˈbætəri/</i>	lǐ xiǎng diàn chí
ideal emf	lǐ xiǎng diàn dòng shì
 induced charge <i>/ɪnˈdʒuːst tʃɑːdʒ/</i>	gǎn yìng diàn hè
 induced current <i>/ɪnˈdʒuːst ˈkærənt/</i>	gǎn yìng diàn liú
induced emf	gǎn yìng diàn dòng shì
 inductance <i>/ɪnˈdʌktəns/</i>	diàn gǎn
induction <i>/ɪnˈdʌkʃn/</i>	gǎn yìng
 inductor <i>/ɪnˈdʌktə/</i>	diàn gǎn qì
 insulator <i>ˈɪnsjuːleɪtə/</i>	jué yuán tǐ
 integrate <i>ˈɪntɪɡreɪt/</i>	jī fēn
integrating	jī fēn
 internal resistance <i>/ɪnˈtɜːnl rɪˈzɪstəns/</i>	nèi zǔ
 inverse-square <i>/ɪnˈvɜːs skweə/</i>	píng fāng fǎn bǐ
 isoline <i>ˈaɪsəliːn/</i>	děng zhí xiàn
Joule heating	jiāo ěr rè

English		Pinyin
 junction <i>/ˈdʒʌŋkʃn/</i>		jié diǎn
 kinetic energy <i>/kɪˈnetɪk ˈenədʒi/</i>		dòng néng
 Kirchhoff's junction rule <i>/ˈkɜːkhɒfs ˈdʒʌŋkʃn ruːl/</i>		jī ěr huò fū jié diǎn dòng zé
 Kirchhoff's loop rule <i>/ˈkɜːkhɒfs luːp ruːl/</i>		jī ěr huò fū huí lù dòng zé
 LC circuit <i>/ˌel ˈsiː ˈsɜːkɪt/</i>	LC	LC diàn lù
 Lenz's law <i>/ˈlentsɪz lɔː/</i>		léng cì dòng lǚ
 linear charge density <i>/ˈlɪniə tʃɑːdʒ ˈdensɪti/</i>		xiàn diàn hè mì dù
 long straight wire		zhǎng zhí dǎo xiàn
 magnetic dipole <i>/mægˈnetɪk ˈdaɪpɒl/</i>		cí ǒu jí zǐ
 magnetic domains <i>/mægˈnetɪk dəˈmeɪnz/</i>		cí chóu
 magnetic field <i>/mægˈnetɪk fiːld/</i>		cí chǎng
 magnetic field lines <i>/mægˈnetɪk fiːld laɪnz/</i>		cí gǎn xiàn
 magnetic flux <i>/mægˈnetɪk flʌks/</i>		cí tōng liàng
 magnetic force <i>/mægˈnetɪk fɔːs/</i>		cí lì
 magnetic monopoles <i>/mægˈnetɪk ˈmɒnəpəʊlz/</i>		cí dān jí zǐ
 magnetic permeability <i>/mægˈnetɪk ˌpɜːməˈbɪlɪti/</i>		cí dǎo lǚ
 Maxwell's equations <i>/ˈmækswelz ɪˈkweɪʒnz/</i>		mài kè sī wéi fāng chéng zǔ
 motional emf <i>/ˈmɒʃənəl emf/</i>		dòng shēng diàn dòng shì
negative <i>/ˈnegətɪv/</i>		fù
neutral <i>/ˈnjuːtrəl/</i>		zhōng xìng

English	Pinyin
no work	bù zuò gōng
$\perp$ normal <i>/ˈnɔːml/</i>	fǎ xiàn
 Ohm's law <i>/əʊmz lɔː/</i>	ōu mǔ dìng lǜ
ϕ ohmic <i>/ˈəʊmɪk/</i>	ōu mǔ xìng
one energy-conservation equation	néng liàng shǒu héng fāng chéng
open circuit <i>/ˈəʊpən ˈsɜːktɪt/</i>	duàn lù
 oscillates <i>/ˈɒsɪleɪts/</i>	zhèn dòng
outer surface	wài biǎo miàn
outward normal	fǎ xiàn
$=$ parallel <i>/ˈpærəlel/</i>	bìng lián
 parallel-plate capacitor <i>/ˈpærəlel plət kəˈpæsɪtə/</i>	píng xíng bǎn diàn róng qì
 paramagnetic <i>/ˌpærəməɡˈnetɪk/</i>	shùn cí xìng
per unit charge	měi dān wèi diàn hè
 permittivity of free space <i>/ˌpɜːmɪˈtɪvəti ɒv friː speɪs/</i>	zhēn kōng jiè diàn cháng shù
$\perp$ perpendicular <i>/ˌpɜːpənˈdɪkjələr/</i>	chuí zhí
 planar symmetry <i>/ˈpleɪnə ˈsɪmətri/</i>	píng miàn duì chèn
• point charges <i>/pɔɪnt ˈtʃɑːdʒɪz/</i>	diǎn diàn hè
 polarization <i>/ˌpəʊləraɪˈzeɪʃn/</i>	jí huà
 polarized <i>/ˌpəʊləraɪzd/</i>	jí huà
positive <i>/ˈpɒzɪtɪv/</i>	zhèng

English		Pinyin
 potential difference <i>/pə'tenʃl 'dɪfrəns/</i>		diàn shì chà
 principle of superposition <i>/'prɪnsɪpl ɒv ,su:pəpə'zɪʃn/</i>		dié jiā yuán lǐ
 projectile motion <i>/prə'dʒektɪl 'məʊʃn/</i>		pāo tǐ yùn dòng
 quantized <i>/'kwɒntaɪzd/</i>		liàng zǐ huà
 RC circuit <i>/,ɑ: 'si: 'sɜ:kɪt/</i>	RC	RC diàn lù
redistributes <i>/,rɪ:'dɪstrɪbjʊ:ts/</i>		chóng xīn fēn bù
repel <i>/rɪ'pel/</i>		pái chì
 resistance <i>/rɪ'zɪstəns/</i>		diàn zǔ
 resistivity <i>/,rɪ:zɪ'stɪvəti/</i>		diàn zǔ lǜ
resistors		diàn zǔ qì
retarding force		zǔ ài lì
 right-hand rule <i>/raɪt hænd ru:l/</i>		yòu shǒu dīng zé
 RL circuit <i>/,ɑ: 'el 'sɜ:kɪt/</i>	RL	RL diàn lù
 scalar <i>/'skeɪlə/</i>		biāo liàng
 series <i>/'sɪəri:z/</i>		chuàn lián
short circuit <i>/ʃɔ:t 'sɜ:kɪt/</i>		duǎn lù
sign		fú hào
sign conventions		fú hào yuē dìng
 simple harmonic motion <i>/'sɪmpl ha:'mɒnɪk 'məʊʃn/</i>		jiǎn xié yùn dòng
 solenoid <i>/'səʊlənɔɪd/</i>		luó xiàn guǎn

English	Pinyin
source of emf	diàn dòng shì yuán
speed <i>/spi:d/</i>	sù lǚ
 spherical symmetry <i>/s'ferɪkl 'sɪmətri/</i>	qiú duì chèn
 steady state <i>/'stedi stert/</i>	wěn tài
 superposition <i>/,su:pəpə'zɪʃn/</i>	dié jiā
 surface charge density <i>/'sɜ:fɪs tʃɑ:dʒ 'densɪti/</i>	miàn diàn hè mì dù
 surface integral <i>/'sɜ:fɪs 'ɪntɪgrəl/</i>	miàn jī fēn
 symmetry <i>/'sɪmətri/</i>	duì chèn xìng
 system <i>/'sɪstəm/</i>	xì tǒng
 tangent <i>/'tændʒənt/</i>	xiāng qiè
temperature <i>/'temprɪtʃə/</i>	wēn dù
 terminal voltage <i>/'tɜ:mɪnl 'vɒltɪdʒ/</i>	duān diàn yā
 test charge <i>/test tʃɑ:dʒ/</i>	jiǎn yàn diàn hè
 time constant <i>/taɪm 'kɒnstənt/</i>	shí jiān cháng shù
= uniform <i>/'ju:nɪfɔ:m/</i>	jūn yún
vector <i>/'vektə/</i>	shǐ liàng
 vector field <i>/'vektə fi:ld/</i>	shǐ liàng chǎng
 velocity selector <i>/və'lsɪti sɪ'lektə/</i>	sù dù xuǎn zé qì
 volt <i>/vɒlt/</i>	fú tè
voltage <i>/'vɒltɪdʒ/</i>	diàn yā

English	Pinyin
 voltmeter /'vɒltmɪ:tə/	diàn yā biǎo
 volume charge density /'vɒljʊ:m tʃɑ:dʒ 'densɪti/ well	tǐ diàn hè mì dù shì jǐng
 work /wɜ:k/ work-energy theorem /wɜ:k 'enədʒi 'θɪərəm/	gōng gōng néng dìng lǐ