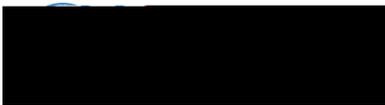


# Ligne directrice sur l'effet catalytique du PBF

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**S w)gu/eg's w)wp 'ghgv'ecvrf vks wg'RDH'A'**

Wpg'cmqecvqp"cw'vktg'f w'RDH's wg'eg'uqk'cw'pkxgcw'f w'r qt vghgwkmq'qw'f w'r tqlgv'guv'eqpukf 2 t2 g" eqo o g" c { cpv'wp'ghgv'ecvrf vks wg'iqtus w)gmq'et2 g'wp"2 rcp'gp'rcxgw'f g'n) rko kpcvqp'f gu'qduvcergu" s vk'dms wgpv'n)cr r vk'«"rc"eqpuqrkf cvkqp" f g"rc"r ckz "«"npi "vgt o g"qw'f wcdng"qw'f g'n)epi ci go gpv' f )cwtgu'r ct vku'r tgpcevgu" f cpu"rgu"ghqtu" f g"eqpuqrkf cvkqp" f g"rc"r ckz "gz krcpvu0'Gp"qwtg."wp" kpxgukugo gpv'f cpu'rg"RDH'guv'2 i crgo gpv'eqpukf 2 t2 "eqo o g" c { cpv'wp'ghgv'ecvrf vks wg'iqtus w)ki hcekrkf g'f pqwgmgu'kpkc'vks gu's wkr r qt vgpv'f g'pqwgmgu't guuqtegu'cwz 'r tkqk2 u'f g'eqpuqrkf cvkqp" f g'rc"r ckz 'f cpu'rg' r c { u0

**Ghgv'ecvrf vks wg'f w'RDH'errtqrkcvqp'pcvqpcrg'gv'f wcdkkr2**

Uw"rc"dcug" f gu" eqpuwncvqpu" cxge" ngu" r ct vku" r tgpcevgu" eqpegt2 gu." ki'gzkng" wp" rkp" gptg" n)cr r tqr tkcvqp'pcvqpcrg."rc" f wcdkkr2 "gv'rgu"ghgw'ecvrf vks wgu0

Ki'c"2 v2 "eqpuv2 "s wg'rgu" r tqlgw'f w'RDH'd2 p2 hkegpv'f )wp"egtckp" f gi t2 "f )cr r tqr tkcvqp'pcvqpcrg" eqo r v'v'gpw'f g'rc"pcwtg'f w'RDH'gv'f g'rc" r ct vkekr cvkqp" f kt gev'f gu'eqpv'gr ct vku'pcvqpcrgu'f 3 u'rg" f 2 dw" f g" vqw" r tqeguuvu." s wg'eg" uqk' cw' pkxgcw' f w' r qt vghgwkmq' qw' f w' r tqlgv0' Egr gpf cpv." n) **errtqrkcvqp'pcvqpcrg'f qwtckv'2 i crgo gpv' vgt'gphqte2 g'qv'eqpuqrkf 2 g'** i t-eg"«"wp'cmqecvqp" f w'RDH'F gu'gzgo r ngu'eqpetgu'f g'eg'tgphqtego gpv'qw'f g'egw'eqpuqrkf cvkqp"uqpv'rgu'o guwtgu'f g" uvkx'eqpet3 vgu'f w'i qwxgtpgo gpv'qw'n) xqnvkqp" f gu'r qrkks wgu'rk2 gu'«"wp" kpxgukugo gpv'f w'RDH' gv'qw'«"n)kv' i tvkqp" f gu'ghqtu'rcpe2 u'r ct 'rg'RDH'f cpu'rgu'dw' i gu'pcvqpcwz0'Ng'tgphqtego gpv'f g" n)cr r tqr tkcvqp'pcvqpcrg"r gw"2 i crgo gpv'ug'vcf vktg."r ct'gzgo r rg."r ct'n)epi ci go gpv'f g'pqwgmgu" r ct vku'r tgpcevgu'iqcevgu'cw'pkxgcw'eqo o wpcwckt g0

F)wp"cw'g'e1/2."ki'r gw" { "cxqk" f gu'ecu" f cpu"rgus wgu"rgu"ghgw'ecvrf vks wgu"p)ko r rks wgpv' r cu" p2 eguucktgo gpv'wp'cr r tqr tkcvqp'pcvqpcrg'r nu'v'q'v'q'w'r nu'eqpuqrkf 2 g0Rct'gzgo r rg."iqtus w)gmgu" eqpf wkgpv'«"n)epi ci go gpv'f g'pqwgcwz"r ct vpc'k'gu'kv'gt'pcvqpcwz." { "eqo r tkv'f gu'f qpcvgtu." f gu' **KK**gv'f )cwtgu." f cpu'rgu'ghqtu'f g'eqpuqrkf cvkqp" f g'rc"r ckz 'f cpu'rg' r c { u0

Gp'eg's vk'eqpegtg'rc" f wcdkkr2 . 'kr' gw' { "cxqk" f gu'ecu."gp'r ct vkw'v'gt'iqtus wg'rgu'ghgw'ecvrf vks wgu" f w'RDH'v'w'p'v'cw'qwt' f g'n)epi ci go gpv'f g'pqwgmgu'r ct vku'r tgpcevgu'f cpu'egtckp'u'r tqeguuvu'qw' f g'rc" hcekrkcvkqp" f g'pqwgcwz'ghqtu'f g'eqpuqrkf cvkqp" f g'rc"r ckz "s vk'u'ceeqo r ci pgpv'f g'pqwgcwz" hpcpego gpw." qA' egu" ghgw" ecvrf vks wgu" r qwtckgpv' 2 i crgo gpv' cuuwtg" rc" f wcdkkr2 " f g" n)kpxgukugo gpv'kpkc'rf w'RDH'gv'f g'ugu't2 uwnw'ur 2 ehks wgu0E) guv'rg'ecu."r ct'gzgo r rg."iqtus wg'rgu" ghgw'ecvrf vks wgu'f w'RDH'ko r rks wgpv'rc" r qwtu'v'g'f g'r tqf vku'gv'f )cev'k2 u'ei'f u's vk'v'v'2 v' hpcpe2 u"

r ct 'h)cmqecvqp'lpklcng'f w'RDH'gv's wkuqpv'b ckvqpcpv'r qwtuwkku'r ct'f )cwt gu'r ctvku'r tgpccvqu'gvqw'  
cxge'f )cwt gu'uqwkqpu'hkpcpelgtu'

Gp't<sup>2</sup> uwo <sup>2</sup>. "rc"eqpegr vqp"gv'rc"o guwtg'f gu'ghgu"ecvnc( vs wgu'f w'RDH'f gxtckgpv" vtg'ghgew? gu'gp"  
eqo r r?o gpvck<sup>2</sup> " cxge" rgu" ghqtu" f g" eqpegr vqp" gv" f g" o guwtg" eqpegtpcpv" rc" f wcdk<sup>2</sup> " f g"  
nkvxgukugo gpv'f cpu'ig'RDH

**Ghgv'ecwrf vs wgu'pqp 'hpcpekt u'gv' hpcpekt u'**

Nghgv'ecwrf vs wgu'pqp 'hpcpekt u'gv' hpcpekt u' r RDH' r gw' ' vtg' f g' pcwtg' pqp' hpcpekt t g' gvlqw' hpcpekt t g' Cr t<sup>3</sup> u' cxqkt' eqpuw<sup>2</sup> "rgu' r ct vkgu' r t gpcpvgu. " { " eqo r tku' rgu' uget<sup>2</sup> vctkcu' f w' RDH' "rg' r gt uqppgn' f w' RDUQ. "rgu' r ct vgpckt gu' hpcpekt u' r g' vkgpp<sup>2</sup> u. 'kic' <sup>2</sup> v' f<sup>2</sup> vgt o kp<sup>2</sup> 's w' nghgv'ecwrf vs wgu'pqp' hpcpekt' gu' f w' p' r nu' i t c p f g' x c r g w' ' c h p' f g' e q o r t g p f t g' n k o r c e v f w' h q p f u' u w t' r c' e q p u q r k f c v k q p' f g' r c' r c k z O'

î "egv<sup>2</sup> i c t f . "rgu' ghgv'ecwrf vs wgu'pqp' v' r t k t k<sup>2</sup> u' c h p' f g' u g' e q p e g p v t g t' f c x c p v c i g' u w t' r g u' g h g w u' e c w r f v s w g u' p q p' h p c p e k t u' g v' u k u' u q p v' l w i <sup>2</sup> u' r g t v k p g p u. "rg' e c w r f g' n g h g v' e c w r f v s w g' r g w' ' v t g' w k r g O' k i c' <sup>2</sup> i c r g o g p v' <sup>2</sup> v' e q p u c v' <sup>2</sup> s w g. "e q o o g' r q w t' r g u' g h g v' e c w r f v s w g u' p q p' h p c p e k t u. "r g u' g h g v u' h p c p e k t u' u q p v' r n u' r g t v k p g p u' c w' p k x g c w' f w' p' r c { u' q w' f w' p' r t q l g v' s w' c w' p k x g c w' f w' h q p f u' f c p u' u q p' g p u g o d r g O' E g r c' r g t o g v' c w' H q p f u' f g' u w k x t g. " f g' o g u w t g t' g v' f g' e q o o w p k s w g t' n g h k e c e k<sup>2</sup> " f g u' r c t v g p c k t g u' f w' r t q l g v' < " o q d k k u g t' r g u' h q p f u' r q w t' r q w t u w k x t g' r g u' v t c x c w z " u w t' r g u' r t k t k<sup>2</sup> u' f g' e q p u q r k f c v k q p' f g' r c' r c k z O' "

**Ghgv'ecwrf vs wgu'pqp 'hpcpekt' f w' RDH'** < u w r t k o g' r g u' q d u x c e r g u' c w' f<sup>2</sup> d r q e c i g' f g u' r t q e g u u w u' r q r k k s w g u. "k p u k w w k q p p g n u' q w' c w t g u' s w k' u q p v' d r q s w<sup>2</sup> u' r q w t' o c k p v g p k' r c' r c k z " < " f k h<sup>2</sup> t g p w u' p k x g c w z " \* p c v k p c n' r q e c n' g v e O' g v l q w' e t<sup>2</sup> g' r g u' e q p f k k q p u' p<sup>2</sup> e g u c k t g u' r q w t' g p i c i g t' f c w t g u' r c t v k g u' r t g p c p v g u' f c p u' r g u' g h g t u' f g' e q p u q r k f c v k q p' f g' r c' r c k z " g z k u c p u' q w' p q w x g c w z " f c p u' w p' e q p v g z w' p c v k p c n' u r<sup>2</sup> e k h s w g O' K<sup>2</sup> c r g o g p v. " r g u' g h g v u' e c w r f v s w g u' p q p' h p c p e k t u' f w' R D H' k o r r k s w g t c k g p v' w p' e j c p i g o g p v' f c p u' r c' x q m p v<sup>2</sup> " r q r k k s w g' g v l q w' r g u' r t c v k s w g u' k p u k w w k q p p g n u' f g u' r c t v k g u' r t g p c p v g u' p c v k p c r g u. " r q e c r g u' g v l q w' k p v g t p c v k p c r g u. " < " f k h<sup>2</sup> t g p w u' p k x g c w z. " s w k' r g t o g w t c k' < " f c w t g u' g h g t u' f g' e q p u q r k f c v k q p' f g' r c' r c k z " o' f k h<sup>2</sup> t g p w u' o' c k u' e q o r r f o g p v c k t g u' < " e g w z " k p k k c r g o g p v' u q w g p w u' r c t' n c m q e c v k p' f w' R D H' o' f c m g t' f g' h c x c p v O' N g u' g h g v u' e c w r f v s w g u' p q p' h p c p e k t u' r q w t c k g p v<sup>2</sup> i c r g o g p v' g p i m d g t' f c w t g u' k o r c e v u. " v g n u' s w g' r c' r k d<sup>2</sup> t c v k p' f w' p' c r r t g p v k u c i g' r n u' r c t i g' f c p u' r g' u g e v g w' f g' r c' e q p u q r k f c v k q p' f g' r c' r c k z " \* g p v t g' r g u' r c { u' g v l g' u g e v g w' g p' i<sup>2</sup> p<sup>2</sup> t c n' q w e q p v t k d w g t' < " t<sup>2</sup> f v k t g' q w' < " c w<sup>2</sup> p w g t' r g u' t k u s w g u' r q w t' r g u' g h g t u' f g' e q p u q r k f c v k q p' f g' r c' r c k z " f c p u' w p' e q p v g z w' u r<sup>2</sup> e k h s w g O'

**Ghgv'ecwrf vs wgu'pqp 'hpcpekt' f w' RDH'** < k i' u g' r t q f v k' r q t u s w w p' l p x g u k u g o g p v' f w' R D H' h c e k k y g' f g' p q w x g m g u' k p k k c v x g u' s w k' c r r q t v g p v' f g' p q w x g m g u' t g u u q w t e g u' c w z' r t k t k<sup>2</sup> u' f g' e q p u q r k f c v k q p' f g' r c' r c k z " f c p u' r g' r c { u. " { " e q o r t k u' h p c p e k t t g u. " j w o c k p g u. " k p u k w w k q p p g n u' g v' c w t g u' O' k i' r g w' u c i k t' f g' n k p<sup>2</sup> i t c v k p' f g u' g h g t u' f g' e q p u q r k f c v k q p' f g' r c' r c k z " r c p e<sup>2</sup> u' r c t' r g' R D H' f c p u' r g u' d w f i g u' p c v k p c w z. " c k p u k' s w g' f w' u q w l g p' h p c p e k t' f g u' f q p c v g w t u' o' w n k r c v<sup>2</sup> t c w z " / { " e q o r t k u' r g u' K H K' / " g v' d k r c v<sup>2</sup> t c w z. " g v' f w' u g e v g w' r t k x<sup>2</sup>. " g p v t g' c w t g u. " c w z' g h g t u' f g' e q p u q r k f c v k q p' f g' r c' r c k z " r k<sup>2</sup> u' < " e g w z' k p k k c r g o g p v' u q w g p w u' r c t' r g' R D H' "

Ngu' ghgv'ecwrf vs wgu' hpcpektu' f w' RDH' xqp' cw' f gn' f gu' t<sup>2</sup> r rks wgu' qw' f gu' xgtukapu' < " i t c p f g' <sup>2</sup> e j g m g' f g u' k p x g u k u g o g p w u' c p v<sup>2</sup> t k g w t u' f w' R D H' d k g p' s w k i' u c i k u g' f g z g o r r g u' v<sup>3</sup> u' e r k t u' f g' e g u' g h g v u' N g u' g h g v u' e c w r f v s w g u' h p c p e k t u' r q w t c k g p v' <sup>2</sup> i c r g o g p v' ' v t g' r k<sup>2</sup> u' < " f g u' e q o r q u c p v g u' u r<sup>2</sup> e k h s w g u' f w' r t q l g v' R D H' c w z " c r r t q e j g u' r t q i t c o o c v k s w g u' w k r u<sup>2</sup> g u. " c w z " o<sup>2</sup> e c p l u o g u' f g'

eqqtf kpcvqp" o ku" gp" r rceg" qw" cwz" ecr cek<sup>2</sup>u" eqpet<sup>3</sup>vgu" eqputwkgu" qw" tgpht<sup>2</sup>gu" i t-eg" <"  
nkp<sup>x</sup>gukugo gpv<sup>l</sup>pkknf w'RDH"gpvtg'cwtgu'qr vkpu0

**Gzgo r igu'lt<sup>2</sup>s wgpw'f)ghgw'ecvrf vks wgu'f w'RDH**

Egtvku'f gu'ecu'igu'r nu'lt<sup>2</sup>s wgpw'f)ghgw'ecvrf vks wgu'f w'RDH'eqo r tgp<sup>pp</sup>gpv<

**N)kpxgukugo gpv'f w'RDH'gu'wvku<sup>2</sup>'eqo o g'rtgwxg'fg'eqpegrv'r qwt"guac{gt'fg'pqwxgngu'  
crrtqej gu'kppqxcpgu'fg'ic'eqpuqkf cvkqp'fg'ic'rck's wktgt o gwgpv'fg't<sup>2</sup>r qpf t g'cwz'dguqkpu'gp"  
uwr gpu'gp' b cvk<sup>2</sup>t g'fg'eqpuqkf cvkqp'fg'ic'rck.'gvkw's wk'rgwxgpv" utg'rtkugu'gp'ejcti g'rct"  
f)cwtgu'rtcvku'rtgpcpvgu'fcpu'ig'b' o g'rc{u'hw'fcpu'f)cwtgu'rtc{u0Rct"gzgo r ig."wp'r tqlgv'f w'  
RDH'gp"Eqmo dkg" c"uqwgpw"nkpv<sup>2</sup>i tcvkqp" f)wpg"cr r tqej g"NI DVKS - "fcpu'igu"o cpf cvu'f g'vtqku"  
kpu<sup>k</sup>wkpu" f g"lwvkg" vcpukqppgng"<sup>2</sup>vdnku'fcpu'ig"ecf t g'fg"n)Ceeqtf "f g"rck"fg"42380'Gp"  
eqpu<sup>2</sup>s wpeg."rc"Eqo o kuqkqp"fg"rc"x<sup>2</sup>tk<sup>2</sup>"fg"Eqmo dkg"gu'f gxgpwg"rc"r tgo k<sup>3</sup>tg"cw"o qpf g"<"  
tgeqppc,vtg'ur<sup>2</sup>ekhs wgo gpv'igu'hqto gu'f kwpv'gu'f g"xkqngpeg"uwdku'r ct"igu'r gtuqppgu"NI DVKS - "  
r gpf cpv'ig"eqphk'cto<sup>2</sup>. 'gv'rc'Lvtkf kvkqp'ur<sup>2</sup>ekng'r qwt"rc"rck"gu'f gxgpwg"rc"r tgo k<sup>3</sup>tg"<"gp**

r ctvgpctlc'cxge'r nmlgwtu'ci gpegu'f gu'P cvkpu'Wpku.'f gu'cwqtk

Ngu"ghgw"ecvñ{ vks wgu" f w"RDH'f qkxgpv'´ vtg"eqpukf<sup>2</sup>t<sup>2</sup>u"eqo o g"ng" f<sup>2</sup>dw'f g"vqw'r tqeguwwu" f g" r tqi tco o cvkqp" f w"RDH'f cpu"wp"r c{ u."s wg"eg"uqk'cw'pkxgcw'f w'r qtvggwng"qw'f w'r tqlgw'Ngu" t gur qpucdkk<sup>2</sup>u"gp"o cvk<sup>2</sup>tg'f g"eqpegr vkqp."f g"uwxgkncpeg."f } xcnwcvkqp"gv'f g"eqo o wplecvkqp" f gu" ghgw"ecvñ{ vks wgu" f w"RDH'xctkgtqp'v'qw'cw'iqpi "f w'e{ erg'f g'r tqi tco o cvkqp0'

**c+ Eqpegr vkqp' f g'r qtvggwngl r t qlgv'gv'crr t qdc vkqp' f w'RCE"**

Cw' ucf g" f g" r" eqpegr vkqp" cw' pkxgcw' f w' r qtvggwng." ngu" eqpukf<sup>2</sup>tcvkqpu" tgrvkwgu" cwz" ghgw" ecvñ{ vks wgu"cwgpw' w'f w"RDH'f gxtckgpv'´ vtg"lpenwugu."uk'r quukdr."f cpu'r" f go cpf g'f } rki kdkk<sup>2</sup>."ng" HTU'qw'igu'WP UF EH'qtus wg'egu'f gtpkgtu"eqo r tgpv'gpv'wp'r kktg'f g'eqpuqkf cvkqp' f g'rc' r ckz0F cpu" ngu'r c{ u'q'Á'k'gz kug'f<sup>2</sup>l«'wp' uget<sup>2</sup> vctkv'f w"RDH'«e)guv'«/f ktg'ngu'r c{ u's wk'f go cpf gpv'wpg'pqwxgmg" <sup>2</sup>rki kdkk<sup>2</sup> +." ng" uget<sup>2</sup>vctkv' f w' RDH' ugtc" ng" r tkpek' cni' t gur qpucdr" f g" nkpv<sup>2</sup>i tcvkqp" f g" egu" eqpukf<sup>2</sup>tcvkqpu0F cpu'ngu'r c{ u's wk'p)qpvr' cu'f g' uget<sup>2</sup> vctkv'f w"RDH'ngu'r gtuqppgu'ej cti <sup>2</sup>gu'f g'f kki gt" ngu'eqpuwncvkqpu'gv'f g'eqpuqkf gt'ngu'f qewo gpv'tgs wku."i <sup>2</sup>p<sup>2</sup>tcrgo gpv'ig'Dwtgcw'f w'Eqqf qpvcvgt" t<sup>2</sup>ukf gpv' \*DET+." ugtqpv' ej cti <sup>2</sup>gu'f kp<sup>2</sup>i tgt" ngu" eqpukf<sup>2</sup>tcvkqpu" tgrvkwgu" cwz" ghgw" ecvñ{ vks wgu" gueqo r v<sup>2</sup>u0'

î "n<sup>2</sup> vcr g'f g'rc"eqpegr vkqp" f w'r tqlgv."eqphqto <sup>2</sup>o gpv'«"rc"r tcvks wg"cewng."ngu"ghgw"ecvñ{ vks wgu" r t<sup>2</sup>xwu" f gxtckgpv'´ vtg"lpenw'f cpu'ng'f qewo gpv'f g"r tqlgv'r ct"n)qti cpkuo g"t gur qpucdr."gp"<sup>2</sup>vtqkg" eqpuwncvkqp" gv' gp" ceeqtf " cxge" ngu" cwtgu" TWP Q

TWP Qu'Ngu'uget<sup>2</sup> vctkw'f w'RDH'qp'v'p't<sup>1</sup>/<sub>2</sub>'g'f g'uw'xgkmp'eg'gp'xgkmp'v'«'eg's wg'ng'uw'k'f g'egu' ghgw'uqk'ghg'v'xgo gpv'kp<sup>2</sup> i t<sup>2</sup> f'cpu'ng'tcr r qtv'f g'r tqlg'0

Gphk'."ngu'ci gpw'f g'dwtgcw'f w'DURD'cuwtgpv'rc'uw'xgkmp'eg'gp'x<sup>2</sup>tkh'cpv's wg'egwg'uw'xgkmp'eg' guv'gp'hckv'kp<sup>2</sup> i t<sup>2</sup> g'f'cpu'ngu'tcr r qtv'g'v'gp'tgeqo o cpf'cpv's w)ng'uqk'kpenwug'cmqtu's wg'eg'p) vck' r cu'ng'ecu'0

Cw'o qo gpv'f g'ng'p<sup>2</sup> g'gp'xki wgw'f g'egu'ri pgu'f k'gevt'egu.'cwewp'ej cpi go gpv'p)guv'tgeqo o cpf<sup>2</sup> f'cpu'ng'hqto cv'f g'f<sup>2</sup>emtcv'kp'0

*e+ T'err qtv'h'pcn'igv<sup>2</sup> xcncv'kqp'f w't qv'ghgw'ng'lt q'lgv'*

Cw'pkxgcw'f w'r qv'ghgw'ng.'hg'tcr r qtv'cppw'ng'lt'v<sup>2</sup> i ks wg'h'pcn'f gxtckv'k'f<sup>2</sup> crgo gpv'kpenwt'g'wpg'ugev'kqp' uw'ngu'ghgw'ecv'cn' v'ks wgu'f w'RDH'0' 'eg'v'kt'g.'f'cpu'ngu'r c { u'f'q<sup>2</sup>u'f'g'EE O 's w'k'hqpev'kpp'gpv.'k'iguv' gpeqwt'ci<sup>2</sup> 's wg'ngwu'o go dtgu'u)gpi ci gpv.'«'rc'h'k'p'f'g'rc'r<sup>2</sup> tkqf'g'f' ) rki kdkk<sup>2</sup> .f'cpu'f'gu'f'kuewu'k'qpu' uw'ngu'ghgw'ecv'cn' v'ks wgu'f w'RDH'qdv'gpwu'cw'pkxgcw'f w'r qv'ghgw'ng'0'f'cpu'ngu'r c { u'q'Á'w'HP FEE' kp<sup>2</sup> i t'cpv'w'p'r k'igt'f'g'eqpu'rk'f'cv'kqp'f'g'rc'r'ckz't'go r'ceg'w'p'HTU.'k'iguv'gpeqwt'ci<sup>2</sup> 'f'g'uw' i<sup>2</sup> t'gt'rc' et<sup>2</sup> cv'kqp'f'w'p'i tqw'g'f'g't<sup>2</sup> uw'ncw'gv'f'g't<sup>2</sup> uw'ncw'f'g'rc'eqpu'rk'f'cv'kqp'f'g'rc'r'ckz's w'k'r'qwt'ckv<sup>2</sup> i crgo gpv' cxqk'f'gu'f'kuewu'k'qpu'uko k'ck'gu'cw'pkxgcw'f w'r qv'ghgw'ng'gv'f w'r tqlg'0'Ng'ug'et<sup>2</sup> vctkw'f w'RDH'f'cpu' ej cs wg'r c { u'ugtc'ej cti<sup>2</sup> 'f'gpeqwt'ci gt'egu'f'kuewu'k'qpu'gv'f'g't'gpf'g'eqo r w'f'g'egu'ghgw'f'cpu'ng' tcr r qtv'UCT'h'pcn'hq'us wg'egu'kphqto cv'kqp'u'ugt'q'v'f'kur'qpk'd'ngu'0

Cw'pkxgcw'f w'r tqlg'v'gv'f w'r qv'ghgw'ng.'ngu'tcr r qtv'h'kpcw'f'g'r' tqlg'v'f'gxt'ck'gpv'k'f<sup>2</sup> crgo gpv'kpenwt'g' wpg'<sup>2</sup> xcncv'kqp'f'gu'ghgw'ecv'cn' v'ks wgu'f w'RDH'k'k'k'peqo dgtck'v'«'n'qti'cp'kuo'g'gv'cwz'ug'et<sup>2</sup> vctkw' t'gur'qpuc'd'ngu'f'g'egwg'v'ej'g.'gp'<sup>2</sup> v'q'kg'eqpu'w'nc'kqp'gv'gp'cee'q'f'cx'ge'ngu'cw'w'gu'TWP Q'0'Ngu' uget<sup>2</sup> vctkw'f w'RDH'qp'v'p't<sup>1</sup>/<sub>2</sub>'g'f g'uw'xgkmp'eg'gp'xgkmp'v'«'eg's wg'ng'x'cncv'kqp'h'k'pc'ng'f'g'egu'ghgw' uqk'ghg'v'xgo gpv'kp<sup>2</sup> i t<sup>2</sup> g'f'cpu'ng'tcr r qtv'h'kpcn'f'w'r tqlg'0

N) xcncv'kqp'f'gu'ghgw'ecv'cn' v'ks wgu'f w'RDH'f'qk'v'v'g'k'p'eng'f'cpu'v'q'w'gu'ngu'<sup>2</sup> xcncv'kqp'u'f'g' r qv'ghgw'ng'gv'f'g'r' tqlg'v'f'w'RDH'g'v'v'g'ghg'ew<sup>2</sup> g'eqphqto<sup>2</sup> o gpv'cw'r' t'qegu'wu'f<sup>2</sup> et'k'ek'f'guu'q'wu'0

Ngu'cmqecvqpu'f g'RDH'r gwagpv'cxqkt "<3+'cwevp"ghgv'ecvcl' vks wg"=4+'wp"egt vclp"ghgv'ecvcl' vks wg ="  
qw'5+'f gu'ghgu'ecvcl' vks wgu'ko r qt vcpw'0Cxcpv'f ) xcmgt 'f cpu's wmg'o guwt g'ngu'ghgu'ecvcl' vks wgu"  
f w'RDH'qp'v<sup>2</sup> v'uki pkl'ecvku.'kn'guv'p<sup>2</sup> eguuck'g'f'f<sup>2</sup> vgt o kpgt'uk'wp"ghgv'ecvcl' vks wg'tgxgpf ks w<sup>2</sup> "guv"





3+ N)cmqecvkqp" f w'RDH'c/√gmg"eqpvtkdw² "«'h'wp" f gu² if o gpw'uwxcpw"<

! rko kpgt 'hgu'qduxcergu'cwz 'r tqeguww'r qrkks wgu. 'f g'eqpuqrkf c'vkqp' f g'rc' r clz "gv'cwt gu. 'qw' t² f vkt g'hgu'tkus wgu. 's wk'cdqtf gpv'hgu'r t'kqt k² u'f g'eqpuqrkf c'vkqp' f g'rc' r clz "gv'q'w'hgu'qduxcergu' «'h'gpi ci go gpv'f g'r ct'vku'r t'gpcp'v'gu'uw r if o gpv'ct gu'f cpu'hgu'ghqt u'f g'eqpuqrkf c'vkqp' f g'rc' r clz "gz'kucpw"A

Hcekktgt' f gu'ghqt u'f g'eqpuqrkf c'vkqp' f g'rc' r clz "g'zr r'ekkgu's wk'cr r qt'v'gpv'f g'p'qwx'gmg'u' t'guu'q'wtegu'r qwt'cdqtf gt' hgu'r t'kqt k² u'f g'eqpuqrkf c'vkqp' f g'rc' r clz "f'cpu'hg' r c { u' A

4+ N)ghgv'ecv'cn' vks wg'guv'ki'hg't² u'wncv'f kt'ge'v'f gu'kp'vgt'x'gp'vkpu'gv'f gu'ce'v'k'k² u'f w'r t'q'lgv'q'w' guv'ki'w'p't² u'wncv'ko r'cev'f g'rc' r t² u'gpeg'f w'r t'q'lgv'RDH'f'cpu'hg' r c { u' A

5+ N)ghgv'ecv'cn' vks wg' f w'RDH² v'ck'ki'hg't² u'wncv'f )wp'g'kp'vgt'ce'vkqp'g'zr r'ekkg' "r ct "gz'go r'ng." f'gu'f'kue'wuk'qpu. 'f'gu'² x'c'nc'v'k'qpu'e'qpl'q'kp'v'gu. 'w'p'g'r'rc'p'h'k'ec'vkqp'e'qpl'q'kp'v'g. "gve'0'gp'v'g" n² s'w'k'g'f'w'RDH'g'v'f'c'w'w'g'u'r'ct'v'ku'r't'gpcp'v'gu'er² u's'w'k'r'ct'eqpu² s'w'gpv.'ug'u'q'pv'gpi'ci'²'gu' f'cpu'f'gu'ghqt'u'f'g'eqpuqrkf'c'vkqp' f'g'rc' r'clz'gz'kucpw'q'w'p'q'w'g'cw' A

Gp"t² uwo ² . "gp"ug"dcucpv"uxt"ngu"qtlgpc'vkpu."etk² t'gu"gv's w'guk'qpu"hw'p'kgu" f'cpu'eg'wg"p'q'v'g."ki' cr r'ct'v'k'p'f'c'cwz'² x'c'nc'v'g'w'u'f'g'n'cmqecvkqp" f w'RDH'f'g'f² v'gto kpgt'f'c'dqtf'uk'w'p'ghgv'ecv'cn' vks wg' t'g'x'g'p'f'k's'w²'guv.'gp'ghgv.'ng't² u'wncv'f'wp'g'cmqecvkqp" f w'RDH'g'v'g'p'v'k'g'f'cpu's'w'gmg'o'g'w'w'g'w'p'v'gn' ghgv'c'² v² 'uki'p'h'k'ec'v'k'0  
Ngu"² x'c'nc'v'g'w'u'f'g'x't'q'p'v'hw'p'k' "w'p'g"cp'cn'f'ug'ur'² ek'ks'wg'g'v'f'gu'k'p'h'q'to'c'vk'qpu's'w'k'u'q'w'k'g'p'p'g'p'v'eg'u' ² x'c'nc'v'k'qpu'f'cpu'h'g'w'u't'c'r'r'q't'u'0

Ngu'gh'g'u"ecv'cn' vks w'gu'h'k'p'c'p'ek'g'tu'e'q'p'v'k'p'v'g't'q'p'v'f' ) v'g"cw'q/f² e'nc't² u'f'cpu'ngu"t'c'r'r'q't'u'f'g'r't'q'lgv' eq'p'h'q'to'² o'g'p'v'«'rc' r't'c'v'ks'wg'gp"eq'w'u"t'c'r'r'q't'v'M'q'd'q'g'v'ug't'q'p'v'c'p'cn'f'u² u'r'ct'ng"RDH'c'w'uk'² i'g'f'g' n'QP'W'0  
F'g'r'n'u."f'cpu'ng"ec'f't'g'f'g'n² x'c'nc'v'k'qpu" h'k'p'c'rg."ngu"² x'c'nc'v'g'w'u"² x'c'nc'v'g't'q'p'v'² i'c'rg'o'g'p'v'ngu'gh'g'u" ecv'cn' vks w'gu'h'k'p'c'p'ek'g'tu."gp'ug"dcucpv'uxt"<  
/Ngu't'c'r'r'q't'u'f'g'r't'q'lgv'M'q'd'q'uw'uo'g'p'v'k'q'p'² u'g'p'² v'c'p'v'r't'w'f'g'p'u's'w'c'p'v'c'w'f'w'r'k'ec'v'k'qpu'r'q'v'p'v'g'g'ng'u' f'cpu'ngu't'c'r'r'q't'u'+  
/F'c'w'w'g'u'f'q'ew'o'g'p'u'hw'p'k'u' r'ct'ngu" T'W'P'Q'U' g'v'ngu" P'W'P'Q'U' f'cpu'ng"ec'f't'g'f'g'ng'z'c'o'g'p' f'q'ew'o'g'p'v'c't'g'f'g'h² x'c'nc'v'k'qpu'g'v'f'gu'q'w'k'u'f'² x'c'nc'v'k'qpu'g'p'v'g'v'g'p'u."g'p's'w'g'u."g'v'e'0-

N? xcmvqp"r gw"´tg"hckg"«"r" hku"cw"pkxgcw"f w"r tqlgv"gv" f w"r qvghwkg"r ct"tcr r qtv"«"r"  
eqpvdwkp"i mdcrg" f wRDH

*Effet catalytique*~~Effet~~*ancier du*